



## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Parts 52 and 81

[EPA-R03-OAR-2014-0022; FRL-9909-41-Region 3]

**Approval and Promulgation of Air Quality Implementation Plans; Delaware; Redesignation Requests, Associated Maintenance Plans, and Motor Vehicle Emissions Budgets for the Delaware Portion of the Philadelphia-Wilmington, PA-NJ-DE Nonattainment Area for the 1997 Annual and 2006 24-Hour Fine Particulate Matter Standards, and the 2007 Comprehensive Emissions Inventory for the 2006 24-Hour Fine Particulate Matter Standard**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to approve the State of Delaware's requests to redesignate to attainment the Delaware portion of the Philadelphia-Wilmington, PA-NJ-DE nonattainment area (hereafter "the Philadelphia Area" or "the Area") for both the 1997 annual and the 2006 24-hour fine particulate matter (PM<sub>2.5</sub>) National Ambient Air Quality Standards (NAAQS or standards). EPA is also proposing to approve as revisions to the Delaware State Implementation Plan (SIP), the associated maintenance plans to show maintenance of the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS through 2025 for the Delaware portion of the Area. EPA is also proposing to approve the motor vehicle emissions budgets (MVEBs) included in Delaware's maintenance plans for the Delaware portion of the Area for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards. EPA is also proposing to determine that the Delaware portion of the Philadelphia Area continues to attain both the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS. In addition, EPA is proposing to approve the 2007 emissions inventory for the Delaware portion of the Area for the 2006 24-hour PM<sub>2.5</sub> NAAQS. In this rulemaking action, EPA also addresses the effects of two decisions of the United States

Court of Appeals for the District of Columbia (D.C. Circuit or Court): The Court's August 21, 2012 decision to vacate and remand to EPA the Cross-State Air Pollution Control Rule (CSAPR); and the Court's January 4, 2013 decision to remand to EPA two final rules implementing the 1997 annual PM<sub>2.5</sub> standard. This rulemaking action to propose approval of the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS redesignation requests and associated maintenance plans for the Delaware portion of the Philadelphia Area is based on EPA's determination that Delaware has met the criteria for redesignation to attainment specified in the Clean Air Act (CAA) for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards. EPA has taken separate rulemaking action to approve the redesignation of the New Jersey portion of the Philadelphia Area for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. *See* 78 FR 54396.

**DATES:** Written comments must be received on or before [insert date 30 days from date of publication].

**ADDRESSES:** Submit your comments, identified by Docket ID Number EPA-R03-OAR-2014-0022 by one of the following methods:

- A. [www.regulations.gov](http://www.regulations.gov). Follow the on-line instructions for submitting comments.
- B. E-mail: [Fernandez.cristina@epa.gov](mailto:Fernandez.cristina@epa.gov).
- C. Mail: EPA-R03-OAR-2014-0022, Cristina Fernandez, Associate Director, Office of Air Quality Planning, Mailcode 3AP30, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103.
- D. Hand Delivery: At the previously-listed EPA Region III address. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

**Instructions:** Direct your comments to Docket ID No. EPA-R03-OAR-2014-0022. EPA's policy is that all comments received will be included in the public docket without change, and may be made available online at [www.regulations.gov](http://www.regulations.gov), including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through [www.regulations.gov](http://www.regulations.gov) or e-mail. The [www.regulations.gov](http://www.regulations.gov) website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through [www.regulations.gov](http://www.regulations.gov), your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

**Docket:** All documents in the electronic docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in [www.regulations.gov](http://www.regulations.gov) or

in hard copy during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the State submittal are available at the Delaware Department of Natural Resources and Environmental Control, 89 Kings Highway, P.O. Box 1401, Dover, Delaware 19903.

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## **SUPPLEMENTARY INFORMATION:**

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#### **I. Background**

The first air quality standards for PM<sub>2.5</sub> were established on July 16, 1997 (62 FR 38652, July 18, 1997). EPA promulgated an annual standard at a level of 15 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), based on a three-year average of annual mean PM<sub>2.5</sub> concentrations (the 1997 annual PM<sub>2.5</sub> standard). In the same rulemaking action, EPA promulgated a 24-hour standard of 65  $\mu\text{g}/\text{m}^3$ , based on a three-year average of the 98<sup>th</sup> percentile of 24-hour concentrations.

On January 5, 2005 (70 FR 944, 1014), EPA published air quality area designations for the 1997 PM<sub>2.5</sub> standards. In that rulemaking action, EPA designated the Philadelphia Area as nonattainment for the 1997 annual PM<sub>2.5</sub> standard. The Philadelphia Area is comprised of New Castle County in Delaware (the Delaware portion of the Area); Burlington, Camden, and Gloucester Counties in New Jersey; and Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties in Pennsylvania. *See* 40 CFR 81.308 (Delaware), 40 CFR 81.331 (New Jersey), and 40 CFR 81.339 (Pennsylvania).

On October 17, 2006 (71 FR 61144), EPA retained the annual average standard at 15  $\mu\text{g}/\text{m}^3$ , but revised the 24-hour standard to 35  $\mu\text{g}/\text{m}^3$ , based again on the three-year average of the 98<sup>th</sup> percentile of 24-hour concentrations (the 2006 annual PM<sub>2.5</sub> standard). On November 13, 2009 (74 FR 58688), EPA published designations for the 2006 24-hour PM<sub>2.5</sub> NAAQS, which became

effective on December 14, 2009. In that rulemaking action, EPA designated the Philadelphia Area as nonattainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS. *See* 77 FR 58775 and also *see* 40 CFR 81.308 (Delaware), 40 CFR 81.331 (New Jersey), and 40 CFR 81.339 (Pennsylvania).

In response to legal challenges of the 2006 annual PM<sub>2.5</sub> standard, the D.C. Circuit remanded this standard to EPA for further consideration. *See American Farm Bureau Federation and National Pork Producers Council, et al. v. EPA*, 559 F.3d 512 (D.C. Cir. 2009). However, given that the 1997 and 2006 annual PM<sub>2.5</sub> standards are essentially identical, attainment of the 1997 annual PM<sub>2.5</sub> standard would also indicate attainment of the remanded 2006 annual PM<sub>2.5</sub> standard. Since the Philadelphia Area is designated nonattainment for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards, today's proposed rulemaking action addresses the redesignation to attainment of the Delaware portion of the Philadelphia Area for these standards.

On May 16, 2012 (77 FR 28782) and January 7, 2013 (78 FR 882), EPA made determinations that the entire Philadelphia Area had attained the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS, respectively. Pursuant to 40 CFR 51.1004(c) and based on these determinations, the requirements for the Philadelphia Area to submit an attainment demonstration and associated reasonably available control measures (RACM), a reasonable further progress (RFP) plan, contingency measures, and other planning SIPs related to the attainment of either the 1997 annual or 2006 24-hour PM<sub>2.5</sub> NAAQS are suspended until such time as: The Area is redesignated to attainment for each standard, at which time the requirements no longer apply; or EPA determines that the Area has again violated any of the standards, at which time such plans are required to be submitted. However, these determinations of attainment do not preclude states

from submitting and EPA from approving planning SIP revisions for the 1997 or 2006 PM<sub>2.5</sub> NAAQS. Delaware submitted an attainment plan for the 1997 PM<sub>2.5</sub> NAAQS, and EPA approved that plan on December 17, 2013 (78 FR 76209).

On December 12, 2012, the Delaware Department of Natural Resources and Environmental Control (DNREC) formally submitted two separate requests to redesignate the Delaware portion of the Philadelphia Area from nonattainment to attainment for the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS, respectively. Each submittal included a maintenance plan as a SIP revision to ensure continued attainment of the standards throughout the Delaware portion of the Area over the next 10 years. The December 12, 2012 submittal also includes a 2007 comprehensive emissions inventory for the 2006 24-hour PM<sub>2.5</sub> NAAQS.

In this proposed rulemaking action, EPA is taking into account two recent decisions of the D.C. Circuit. In the first of the two Court decisions, the D.C. Circuit, on August 21, 2012, issued *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012), which vacated and remanded CSAPR and ordered EPA to continue administering the Clean Air Interstate Rule (CAIR) “pending . . . development of a valid replacement.” *EME Homer City* at 38. The D.C. Circuit denied all petitions for rehearing on January 24, 2013. In the second decision, on January 4, 2013, in *Natural Resources Defense Council v. EPA*, the D.C. Circuit remanded to EPA the “Final Clean Air Fine Particle Implementation Rule” (72 FR 20586, April 25, 2007) and the “Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>)” final rule (73 FR 28321, May 16, 2008). 706 F.3d 428 (D.C. Cir. 2013).

## **II. EPA's Requirements**

### **A. Criteria for Redesignation to Attainment**

The CAA provides the requirements for redesignating a nonattainment area to attainment. Specifically, section 107(d)(3)(E) of the CAA allows for redesignation providing that: (1) EPA determines that the area has attained the applicable NAAQS; (2) EPA has fully approved the applicable implementation plan for the area under section 110(k); (3) EPA determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable SIP and applicable Federal air pollutant control regulations and other permanent and enforceable reductions; (4) EPA has fully approved a maintenance plan for the area as meeting the requirements of section 175A of the CAA; and (5) the state containing such area has met all requirements applicable to the area under section 110 and part D.

EPA has provided guidance on redesignation in the "State Implementation Plans; General Preamble for the Implementation of Title I of the Clear Air Act Amendments of 1990," (57 FR 13498, April 16, 1992) (the "General Preamble") and has provided further guidance on processing redesignation requests in the following documents: (1) "Procedures for Processing Requests to Redesignate Areas to Attainment," Memorandum from John Calcagni, Director, Air Quality Management Division, September 4, 1992 (hereafter the "1992 Calcagni Memorandum"); (2) "State Implementation Plan (SIP) Actions Submitted in Response to Clean Air Act (CAA) Deadlines," Memorandum from John Calcagni, Director, Air Quality Management Division, October 28, 1992; and (3) "Part D New Source Review (Part D NSR)



Requirements for Areas Requesting Redesignation to Attainment,” Memorandum from Mary D. Nichols, Assistant Administrator for Air and Radiation, October 14, 1994.

## **B. Requirements of a Maintenance Plan**

Section 175A of the CAA sets forth the elements of a maintenance plan for areas seeking redesignation from nonattainment to attainment. Under section 175A, the plan must demonstrate continued attainment of the applicable NAAQS for at least 10 years after approval of a redesignation of an area to attainment. Eight years after the redesignation, the state must submit a revised maintenance plan demonstrating that attainment will continue to be maintained for the 10 years following the initial 10-year period. To address the possibility of future NAAQS violations, the maintenance plan must contain such contingency measures, with a schedule for implementation, as EPA deems necessary to assure prompt correction of any future PM<sub>2.5</sub> violations.

The 1992 Calcagni Memorandum provides additional guidance on the content of a maintenance plan. The memorandum states that a PM<sub>2.5</sub> maintenance plan should address the following provisions: (1) An attainment emissions inventory; (2) a maintenance demonstration showing maintenance for 10 years; (3) a commitment to maintain the existing monitoring network; (4) verification of continued attainment; and (5) a contingency plan to prevent or correct future violations of the NAAQS.

### **III. Summary of Proposed Actions**

EPA is proposing to take several rulemaking actions related to the redesignation of the Delaware portion of the Philadelphia Area to attainment for both the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS. EPA is proposing to find that the Delaware portion of the Area meets the requirements for redesignation of the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS under section 107(d)(3)(E) of the CAA. EPA is thus proposing to approve Delaware's requests to change the legal designation of the Delaware portion of the Area from nonattainment to attainment for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. This rulemaking action does not impact the legal designation of the New Jersey and Pennsylvania portions of the Philadelphia Area. On September 4, 2013 (78 FR 54396), EPA took separate rulemaking action to redesignate to attainment the New Jersey portion of the Area for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS.

EPA is also proposing to approve the associated maintenance plans for the Delaware portion of the Area as revisions to the Delaware SIP for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS, including the MVEBs for the Delaware portion of the Area for both the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> standards. The approval of the maintenance plans is one of the CAA criteria for redesignation of the Delaware portion of the Area to attainment for both standards.

Delaware's maintenance plans are designed to ensure continued attainment in the Delaware portion of the Area of the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards, respectively, for 10 years after redesignation.

EPA previously determined that the Philadelphia Area has attained both the 1997 annual and

2006 24-hour PM<sub>2.5</sub> NAAQS, and EPA is proposing to find that the Area continues to attain both standards. Furthermore, under section 172(c)(3) of the CAA, EPA is proposing to approve the 2007 comprehensive emissions inventory for the Delaware portion of the Area as part of Delaware's SIP for the 2006 24-hour PM<sub>2.5</sub> NAAQS. EPA's analysis of the proposed actions is provided in section V of today's proposed rulemaking action.

#### **IV. Effects of Recent Court Decisions on Proposed Actions**

##### **A. Effect of the August 21, 2012 D.C. Circuit Decision Regarding EPA's CSAPR**

Delaware has demonstrated that attainment of the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS will be maintained with or without the implementation of CAIR or CSAPR. Delaware does not rely on either CAIR or CSAPR in its maintenance plans for either the 1997 or the 2006 PM<sub>2.5</sub> NAAQS, and demonstrates that emission reductions from CAIR or CSAPR are not needed to maintain the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. In addition, modeling conducted by EPA during the CSAPR rulemaking process also demonstrates that the counties in the Philadelphia Area will have PM<sub>2.5</sub> levels below the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS in both 2012 and 2014 without taking into account emissions reductions from CAIR or CSAPR. *See* "Air Quality Modeling Final Rule Technical Support Document," App. B, B-37, B-51 B-57, B-58, B-66, B-80, B-86. This modeling is available in the docket for this proposed redesignation action.

Moreover, in its August 2012 decision, the Court also ordered EPA to continue implementing CAIR. *See EME Homer City Generation LP v. EPA*, 696 F.3d 7 (D.C. Cir. 2012). In sum, neither the current status of CAIR nor the current status of CSAPR affects any of the criteria for

proposed approval of this redesignation request for the Philadelphia Area.

## **B. Effect of the January 4, 2013 D.C. Circuit Decision Regarding PM<sub>2.5</sub> Implementation under Subpart 4 of Part D of Title I of the CAA**

### **1. Background**

As discussed previously, on January 4, 2013, in *Natural Resources Defense Council (NRDC) v. EPA*, the D.C. Circuit remanded to EPA the “Final Clean Air Fine Particle Implementation Rule” (72 FR 20586, April 25, 2007) and the “Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM<sub>2.5</sub>)” final rule (73 FR 28321, May 16, 2008) (collectively, “1997 PM<sub>2.5</sub> Implementation Rule”). 706 F.3d 428 (D.C. Cir. 2013). The Court found that EPA erred in implementing the 1997 annual PM<sub>2.5</sub> NAAQS pursuant to the general implementation provisions of subpart 1 of part D of Title I of the CAA (subpart 1), rather than the particulate-matter-specific provisions of subpart 4 of Part D of Title I (subpart 4). Although the Court did not directly address the 2006 24-hour PM<sub>2.5</sub> standard, EPA is taking into account the Court’s position on subpart 4 and the 1997 annual PM<sub>2.5</sub> standard in evaluating redesignations for the 2006 24-hour PM<sub>2.5</sub> standard.

### **2. Proposal on this Issue**

EPA is proposing to determine that the Court’s January 4, 2013 decision does not prevent EPA from redesignating the Delaware portion of the Philadelphia Area to attainment for either the 1997 annual or the 2006 24-hour PM<sub>2.5</sub> NAAQS. Even in light of the Court’s decision, redesignation for this Area is appropriate under the CAA and EPA’s longstanding interpretations of the CAA’s provisions regarding redesignation. EPA first explains its longstanding

interpretation that requirements that are imposed, or that become due, after a complete redesignation request is submitted for an area that is attaining the standard, are not applicable for purposes of evaluating a redesignation request. Second, EPA then shows that, even if EPA applies the subpart 4 requirements to the Delaware redesignation requests and disregards the provisions of its 1997 PM<sub>2.5</sub> Implementation Rule recently remanded by the Court, the State's request for redesignation of the Area still qualifies for approval. EPA's discussion takes into account the effect of the Court's ruling on the Area's maintenance plan, which EPA views as approvable when subpart 4 requirements are considered.

**a. Applicable Requirements for Purposes of Evaluating the Redesignation Requests**

With respect to the 1997 PM<sub>2.5</sub> Implementation Rule, the Court's January 4, 2013 ruling rejected EPA's reasons for implementing the PM<sub>2.5</sub> NAAQS solely in accordance with the provisions of subpart 1, and remanded that matter to EPA, so that it could address implementation of the 1997 annual PM<sub>2.5</sub> NAAQS under subpart 4, in addition to subpart 1. For the purposes of evaluating Delaware's redesignation request for the Delaware portion of the Area, to the extent that implementation under subpart 4 would impose additional requirements for areas designated nonattainment, EPA believes that those requirements are not "applicable" for the purposes of CAA section 107(d)(3)(E), and thus EPA is not required to consider subpart 4 requirements with respect to the redesignation of the Delaware portion of the Philadelphia Area. Under its longstanding interpretation of the CAA, EPA has interpreted section 107(d)(3)(E) to mean, as a threshold matter, that the part D provisions which are "applicable" and which must be approved in order for EPA to redesignate an area include only those which came due prior to a state's submittal of a complete redesignation request. *See* 1992 Calcagni Memorandum. *See also*

“State Implementation Plan (SIP) Requirements for Areas Submitting Requests for Redesignation to Attainment of the Ozone and Carbon Monoxide (CO) National Ambient Air Quality Standards (NAAQS) on or after November 15, 1992,” Memorandum from Michael Shapiro, Acting Assistant Administrator, Air and Radiation, September 17, 1993 (Shapiro memorandum); Final Redesignation of Detroit-Ann Arbor, (60 FR 12459, 12465-66, March 7, 1995); Final Redesignation of St. Louis, Missouri, (68 FR 25418, 25424-27, May 12, 2003); *Sierra Club v. EPA*, 375 F.3d 537, 541 (7th Cir. 2004) (upholding EPA’s redesignation rulemaking applying this interpretation and expressly rejecting Sierra Club’s view that the meaning of “applicable” under the statute is “whatever should have been in the plan at the time of attainment rather than whatever actually was in the plan and already implemented or due at the time of attainment”).<sup>1</sup> In this case, at the time that Delaware submitted its redesignation requests for both standards, the requirements under subpart 4 were not due, and indeed, were not yet known to apply.

EPA’s view that, for purposes of evaluating the redesignation of the Delaware portion of the Philadelphia Area, the subpart 4 requirements were not due at the time Delaware submitted the redesignation requests is in keeping with the EPA’s interpretation of subpart 2 requirements for subpart 1 ozone areas redesignated subsequent to the D.C. Circuit’s decision in *South Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882 (D.C. Cir. 2006). In *South Coast*, the Court found that EPA was not permitted to implement the 1997 8-hour ozone standard solely under subpart 1, and held that EPA was required under the statute to implement the standard under the ozone-specific

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<sup>1</sup> Applicable requirements of the CAA that come due subsequent to the area’s submittal of a complete redesignation request remain applicable until a redesignation is approved, but are not required as a prerequisite to redesignation. Section 175A(c) of the CAA.

requirements of subpart 2 as well. Subsequent to the *South Coast* decision, in evaluating and acting upon redesignation requests for the 1997 8-hour ozone standard that were submitted to EPA for areas under subpart 1, EPA applied its longstanding interpretation of the CAA that “applicable requirements,” for purposes of evaluating a redesignation, are those that had been due at the time the redesignation request was submitted. *See, e.g.*, Proposed Redesignation of Manitowoc County and Door County Nonattainment Areas (75 FR 22047, 22050, April 27, 2010). In those actions, EPA, therefore, did not consider subpart 2 requirements to be “applicable” for the purposes of evaluating whether the area should be redesignated under section 107(d)(3)(E).

EPA’s interpretation derives from the provisions of section 107(d)(3). Section 107(d)(3)(E)(v) states that, for an area to be redesignated, a state must meet “all requirements ‘applicable’ to the area under section 110 and part D.” Section 107(d)(3)(E)(ii) provides that the EPA must have fully approved the “applicable” SIP for the area seeking redesignation. These two sections read together support EPA’s interpretation of “applicable” as only those requirements that came due prior to submission of a complete redesignation request. First, holding states to an ongoing obligation to adopt new CAA requirements that arose after the state submitted its redesignation request, in order to be redesignated, would make it problematic or impossible for EPA to act on redesignation requests in accordance with the 18-month deadline Congress set for EPA action in section 107(d)(3)(D). If “applicable requirements” were interpreted to be a continuing flow of requirements with no reasonable limitation, states, after submitting a redesignation request, would be forced continuously to make additional SIP submissions that in turn would require EPA to undertake further notice-and-comment rulemaking actions to act on those submissions.

This would create a regime of unceasing rulemaking that would delay action on the redesignation request beyond the 18-month timeframe provided by the CAA for this purpose.

Second, a fundamental premise for redesignating a nonattainment area to attainment is that the area has attained the relevant NAAQS due to emission reductions from existing controls. Thus, an area for which a redesignation request has been submitted would have already attained the NAAQS as a result of satisfying statutory requirements that came due prior to the submission of the request. Absent a showing that unadopted and unimplemented requirements are necessary for future maintenance, it is reasonable to view the requirements applicable for purposes of evaluating the redesignation request as including only those SIP requirements that have already come due. These are the requirements that led to attainment of the NAAQS. To require, for redesignation approval, that a state also satisfy additional SIP requirements coming due after the state submits its complete redesignation request, and while EPA is reviewing it, would compel the state to do more than is necessary to attain the NAAQS, without a showing that the additional requirements are necessary for maintenance.

In the context of this redesignation, the timing and nature of the Court's January 4, 2013 decision in *NRDC v. EPA* compound the consequences of imposing requirements that come due after the redesignation request is submitted. Delaware submitted its two redesignation requests for the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS on December 12, 2012, but the Court did not issue its decision remanding EPA's 1997 PM<sub>2.5</sub> Implementation Rule concerning the applicability of the provisions of subpart 4 until January 2013.



To require Delaware's fully-completed and pending redesignation requests for both the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS to comply now with requirements of subpart 4 that the Court announced only in its January 2013 decision on the 1997 PM<sub>2.5</sub> Implementation Rule, would be to give retroactive effect to such requirements when the State had no notice that it was required to meet them. The D.C. Circuit recognized the inequity of this type of retroactive impact in *Sierra Club v. Whitman*, 285 F.3d 63 (D.C. Cir. 2002),<sup>2</sup> where it upheld the District Court's ruling refusing to make retroactive EPA's determination that the St. Louis area did not meet its attainment deadline. In that case, petitioners urged the Court to make EPA's nonattainment determination effective as of the date that the statute required, rather than the later date on which EPA actually made the determination. The Court rejected this view, stating that applying it "would likely impose large costs on States, which would face fines and suits for not implementing air pollution prevention plans . . . even though they were not on notice at the time." *Id.* at 68. Similarly, it would be unreasonable to penalize the State of Delaware by rejecting its redesignation request for an area that is already attaining both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards and that met all applicable requirements known to be in effect at the time of the requests. For EPA now to reject the redesignation requests solely because the State did not expressly address subpart 4 requirements of which it had no notice, would inflict the same unfairness condemned by the Court in *Sierra Club v. Whitman*.

#### **b. Subpart 4 Requirements and Delaware Redesignation Requests**

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<sup>2</sup> *Sierra Club v. Whitman* was discussed and distinguished in a recent D.C. Circuit decision that addressed retroactivity in a quite different context, where, unlike the situation here, EPA sought to give its regulations retroactive effect. *National Petrochemical and Refiners Ass'n v. EPA*. 630 F.3d 145, 163 (D.C. Cir. 2010), rehearing denied 643 F.3d 958 (D.C. Cir. 2011), cert denied 132 S. Ct. 571 (2011).

<sup>3</sup> PM<sub>10</sub> refers to particulates nominally 10 micrometers in diameter or smaller.

Even if EPA were to take the view that the Court's January 4, 2013 decision requires that, in the context of pending redesignations for either the 1997 annual or 2006 24-hour PM<sub>2.5</sub> standards, subpart 4 requirements were due and in effect at the time Delaware submitted its redesignation requests, EPA proposes to determine that the Delaware portion of the Philadelphia Area still qualifies for redesignation to attainment for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards. As explained subsequently, EPA believes that the two redesignation requests for the Delaware portion of the Philadelphia Area, though not expressed in terms of subpart 4 requirements, substantively meet the requirements of that subpart for purposes of redesignating the Delaware portion of the Area to attainment for both standards.

With respect to evaluating the relevant substantive requirements of subpart 4 for purposes of redesignating the Delaware portion of the Philadelphia Area, EPA notes that subpart 4 incorporates components of subpart 1 of part D, which contains general air quality planning requirements for areas designated as nonattainment. *See* section 172(c). Subpart 4 itself contains specific planning and scheduling requirements for coarse particulate matter (PM<sub>10</sub>)<sup>3</sup> nonattainment areas, and under the Court's January 4, 2013 decision in *NRDC v. EPA*, these same statutory requirements also apply for PM<sub>2.5</sub> nonattainment areas. EPA has longstanding general guidance that interprets the 1990 amendments to the CAA, making recommendations to states for meeting the statutory requirements for SIPs for nonattainment areas. *See*, the General Preamble. In the General Preamble, EPA discussed the relationship of subpart 1 and subpart 4 SIP requirements, and pointed out that subpart 1 requirements were to an extent "subsumed by, or integrally related to, the more specific PM<sub>10</sub> requirements" (57 FR 13538, April 16, 1992).

The subpart 1 requirements include, among other things, provisions for attainment demonstrations, RACM, RFP, emissions inventories, and contingency measures.

For the purposes of these redesignation requests, in order to identify any additional requirements which would apply under subpart 4, EPA is considering the Philadelphia Area to be a “moderate” PM<sub>2.5</sub> nonattainment area. Under section 188 of the CAA, all areas designated nonattainment areas under subpart 4 would initially be classified by operation of law as “moderate” nonattainment areas, and would remain moderate nonattainment areas unless and until EPA reclassifies the area as a “serious” nonattainment area. Accordingly, EPA believes that it is appropriate to limit the evaluation of the potential impact of subpart 4 requirements to those that would be applicable to moderate nonattainment areas. Sections 189(a) and (c) of subpart 4 apply to moderate nonattainment areas and include the following: (1) An approved permit program for construction of new and modified major stationary sources (section 189(a)(1)(A)); (2) an attainment demonstration (section 189(a)(1)(B)); (3) provisions for RACM (section 189(a)(1)(C)); and (4) quantitative milestones demonstrating RFP toward attainment by the applicable attainment date (section 189(c)).

The permit requirements of subpart 4, as contained in section 189(a)(1)(A), refer to and apply the subpart 1 permit provisions requirements of sections 172 and 173 to PM<sub>10</sub>, without adding to them. Consequently, EPA believes that section 189(a)(1)(A) does not itself impose for redesignation purposes any additional requirements for moderate areas beyond those contained in subpart 1.<sup>4</sup> In any event, in the context of redesignation, EPA has long relied on the

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<sup>4</sup>The potential effect of section 189(e) on section 189(a)(1)(A) for purposes of evaluating these redesignation

interpretation that a fully approved nonattainment new source review program is not considered an applicable requirement for redesignation, provided the area can maintain the standard with a prevention of significant deterioration (PSD) program after redesignation. A detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled, “Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment.” *See also* rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

With respect to the specific attainment planning requirements under subpart 4,<sup>5</sup> when EPA evaluates a redesignation request under either subpart 1 and/or 4, any area that is attaining the PM<sub>2.5</sub> standards is viewed as having satisfied the attainment planning requirements for these subparts. For redesignations, EPA has for many years interpreted attainment-linked requirements as not applicable for areas attaining the standard. In the General Preamble, EPA stated that, “The requirements for RFP will not apply in evaluating a request for redesignation to attainment since, at a minimum, the air quality data for the area must show that the area has already attained. Showing that the State will make RFP towards attainment will, therefore, have no meaning at that point.” *See* 57 FR 13564.

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requests is discussed in this rulemaking action.

<sup>5</sup> I.e., attainment demonstration, RFP, RACM, milestone requirements, contingency measures.

The General Preamble also explained that, “[t]he section 172(c)(9) requirements are directed at ensuring RFP and attainment by the applicable date. These requirements no longer apply when an area has attained the standard and is eligible for redesignation. Furthermore, section 175A for maintenance plans . . . provides specific requirements for contingency measures that effectively supersede the requirements of section 172(c)(9) for these areas.” *Id.* EPA similarly stated in its 1992 Calcagni Memorandum that, “The requirements for reasonable further progress and other measures needed for attainment will not apply for redesignations because they only have meaning for areas not attaining the standard.”

It is evident that even if we were to consider the Court’s January 4, 2013 decision in *NRDC v. EPA* to mean that attainment-related requirements specific to subpart 4 should be imposed retroactively<sup>6</sup> and, thus, are now past due, those requirements do not apply to an area that is attaining the 1997 annual and/or the 2006 24-hour PM<sub>2.5</sub> NAAQS, for the purpose of evaluating a pending request to redesignate the area to attainment. EPA has consistently enunciated this interpretation of applicable requirements under section 107(d)(3)(E) since the General Preamble was published more than twenty years ago. Courts have recognized the scope of EPA’s authority to interpret “applicable requirements” in the redesignation context. *See Sierra Club v. EPA*, 375 F.3d 537 (7<sup>th</sup> Cir. 2004).

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<sup>6</sup> As EPA has explained previously, we do not believe that the Court’s January 4, 2013 decision should be interpreted so as to impose these requirements on the states retroactively. *Sierra Club v. Whitman*, *supra*.

Moreover, even outside the context of redesignations, EPA has viewed the obligations to submit attainment-related SIP planning requirements of subpart 4 as inapplicable for areas that EPA determines are attaining the 1997 annual and/or the 2006 24-hour PM<sub>2.5</sub> standard. EPA's prior "Clean Data Policy" rulemakings for the PM<sub>10</sub> NAAQS, also governed by the requirements of subpart 4, explain EPA's reasoning. They describe the effects of a determination of attainment on the attainment-related SIP planning requirements of subpart 4. *See* "Determination of Attainment for Coso Junction Nonattainment Area," (75 FR 27944, May 19, 2010). *See also* Coso Junction Proposed PM<sub>10</sub> Redesignation, (75 FR 36023, 36027, June 24, 2010); Proposed and Final Determinations of Attainment for San Joaquin Nonattainment Area (71 FR 40952, 40954–55, July 19, 2006 and 71 FR 63641, 63643–47, October 30, 2006). In short, EPA in this context has also long concluded that to require states to meet superfluous SIP planning requirements is not necessary and not required by the CAA, so long as those areas continue to attain the relevant NAAQS.

Elsewhere in this notice, EPA proposes to determine that the Philadelphia Area has attained both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. Under its longstanding interpretation, EPA is proposing to determine here that the Delaware portion of the Area meets the attainment-related plan requirements of subparts 1 and 4 for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. Thus, EPA is proposing to conclude that the requirements to submit an attainment demonstration under 189(a)(1)(B), a RACM determination under section 172(c)(1) and section 189(a)(1)(c), a RFP demonstration under 189(c)(1), and contingency measure requirements under section 172(c)(9) are satisfied for purposes of evaluating these redesignation requests.

### **c. Subpart 4 and Control of PM<sub>2.5</sub> Precursors**

The D.C. Circuit in *NRDC v. EPA* remanded to EPA the two rules at issue in the case with instructions to EPA to re-promulgate them consistent with the requirements of subpart 4. EPA in this section addresses the Court's opinion with respect to PM<sub>2.5</sub> precursors. While past implementation of subpart 4 for PM<sub>10</sub> has allowed for control of PM<sub>10</sub> precursors such as NO<sub>x</sub> from major stationary, mobile, and area sources in order to attain the standard as expeditiously as practicable, CAA section 189(e) specifically provides that control requirements for major stationary sources of direct PM<sub>10</sub> shall also apply to PM<sub>10</sub> precursors from those sources, except where EPA determines that major stationary sources of such precursors "do not contribute significantly to PM<sub>10</sub> levels which exceed the standard in the area."

EPA's 1997 PM<sub>2.5</sub> implementation rule, remanded by the D.C. Circuit, contained rebuttable presumptions concerning certain PM<sub>2.5</sub> precursors applicable to attainment plans and control measures related to those plans. Specifically, in 40 CFR 51.1002, EPA provided, among other things, that a state was "not required to address VOC [and ammonia] as . . . PM<sub>2.5</sub> attainment plan precursor[s] and to evaluate sources of VOC [and ammonia] emissions in the State for control measures." EPA intended these to be rebuttable presumptions. EPA established these presumptions at the time because of uncertainties regarding the emission inventories for these pollutants and the effectiveness of specific control measures in various regions of the country in reducing PM<sub>2.5</sub> concentrations. EPA also left open the possibility for such regulation of VOC and ammonia in specific areas where that was necessary.

The Court in its January 4, 2013 decision made reference to both section 189(e) and 40 CFR 51.1002, and stated that, “In light of our disposition, we need not address the petitioners’ challenge to the presumptions in [40 CFR 51.1002] that volatile organic compounds and ammonia are not PM<sub>2.5</sub> precursors, as subpart 4 expressly governs precursor presumptions.” *NRDC v. EPA*, at 27, n.10.

Elsewhere in the Court’s opinion, however, the Court observed, “Ammonia is a precursor to fine particulate matter, making it a precursor to both PM<sub>2.5</sub> and PM<sub>10</sub>. For a PM<sub>10</sub> nonattainment area governed by subpart 4, a precursor is presumptively regulated. See 42 U.S.C. § 7513a(e) [section 189(e)].” *Id.* at 21, n.7.

For a number of reasons, EPA believes that its proposed redesignation of the Delaware portion of the Philadelphia Area is consistent with the Court’s decision on this aspect of subpart 4. First, while the Court, citing section 189(e), stated that “for a PM<sub>10</sub> area governed by subpart 4, a precursor is ‘presumptively regulated,’” the Court expressly declined to decide the specific challenge to EPA’s 1997 PM<sub>2.5</sub> implementation rule provisions regarding ammonia and VOC as precursors. The Court had no occasion to reach whether and how it was substantively necessary to regulate any specific precursor in a particular PM<sub>2.5</sub> nonattainment area, and did not address what might be necessary for purposes of acting upon a redesignation request.

However, even if EPA takes the view that the requirements of subpart 4 were deemed applicable at the time the state submitted the redesignation request, and disregards the implementation rule’s rebuttable presumptions regarding ammonia and VOC as PM<sub>2.5</sub> precursors, the regulatory



consequence would be to consider the need for regulation of all precursors from any sources in the area to demonstrate attainment and to apply the section 189(e) provisions to major stationary sources of precursors. In the case of the Delaware portion of the Philadelphia Area, EPA believes that doing so is consistent with proposing redesignation of the area for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standard. The Philadelphia Area has attained the standard without any specific additional controls of VOC and ammonia emissions from any sources in the area.

Precursors in subpart 4 are specifically regulated under the provisions of section 189(e), which requires, with important exceptions, control requirements for major stationary sources of PM<sub>10</sub> precursors.<sup>7</sup> Under subpart 1 and EPA's prior implementation rule, all major stationary sources of PM<sub>2.5</sub> precursors were subject to regulation, with the exception of ammonia and VOC. Thus, EPA must address here whether additional controls of ammonia and VOC from major stationary sources are required under section 189(e) of subpart 4 in order to redesignate the area for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards. As explained further in this rulemaking action, EPA does not believe that any additional controls of ammonia and VOC are required in the context of this redesignation.

In the General Preamble, EPA discusses its approach to implementing section 189(e). *See* 57 FR 13538-13542. With regard to precursor regulation under section 189(e), the General Preamble explicitly stated that control of VOCs under other CAA requirements may suffice to relieve a state from the need to adopt precursor controls under section 189(e). *See* 57 FR 13542. In this

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<sup>7</sup> Under either subpart 1 or subpart 4, for purposes of demonstrating attainment as expeditiously as practicable, a state is required to evaluate all economically and technologically feasible control measures for direct PM emissions and precursor emissions, and adopt those measures that are deemed reasonably available.

proposed rulemaking action, EPA proposes to determine that the SIP has met the provisions of section 189(e) with respect to ammonia and VOCs as precursors. This proposed determination is based on EPA's findings that (1) the Delaware portion of the Philadelphia Area contains no major stationary sources of ammonia, and (2) existing major stationary sources of VOC are adequately controlled under other provisions of the CAA regulating the ozone NAAQS.<sup>8</sup> In the alternative, EPA proposes to determine that, under the express exception provisions of section 189(e), and in the context of the redesignation of the area, which is attaining the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards, at present ammonia and VOC precursors from major stationary sources do not contribute significantly to levels exceeding the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards in the Philadelphia Area. *See* 57 FR 13539-42.

EPA notes that its 1997 annual PM<sub>2.5</sub> implementation rule provisions in 40 CFR 51.1002 were not directed at evaluation of PM<sub>2.5</sub> precursors in the context of redesignation, but at SIP plans and control measures required to bring a nonattainment area into attainment of the 1997 PM<sub>2.5</sub> NAAQS. By contrast, redesignation to attainment primarily requires the area to have already attained due to permanent and enforceable emission reductions, and to demonstrate that controls in place can continue to maintain the standard. Thus, even if we regard the Court's January 4, 2013 decision as calling for "presumptive regulation" of ammonia and VOC for PM<sub>2.5</sub> under the attainment planning provisions of subpart 4, those provisions in and of themselves do not require additional controls of these precursors for an area that already qualifies for redesignation. Nor

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<sup>8</sup>The Philadelphia Area has reduced VOC emissions through the implementation of various control programs including VOC Reasonably Available Control Technology regulations and various on-road and non-road motor vehicle control programs.

does EPA believe that requiring Delaware to address precursors differently than they have already would result in a substantively different outcome.

Although, as EPA has emphasized, its consideration here of precursor requirements under subpart 4 is in the context of a redesignation to attainment, EPA's existing interpretation of subpart 4 requirements with respect to precursors in attainment plans for PM<sub>10</sub> contemplates that states may develop attainment plans that regulate only those precursors that are necessary for purposes of attainment in the area in question, i.e., states may determine that only certain precursors need be regulated for attainment and control purposes.<sup>9</sup> Courts have upheld this approach to the requirements of subpart 4 for PM<sub>10</sub>.<sup>10</sup> EPA believes that application of this approach to PM<sub>2.5</sub> precursors under subpart 4 is reasonable. Because the Philadelphia Area has already attained the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS with its current approach to regulation of PM<sub>2.5</sub> precursors, EPA believes that it is reasonable to conclude in the context of this redesignation that there is no need to revisit the attainment control strategy with respect to the treatment of precursors. Even if the Court's decision is construed to impose an obligation, in evaluating this redesignation request, to consider additional precursors under subpart 4, it would not affect EPA's approval here of Delaware's request for redesignation of the Delaware portion of the Philadelphia Area. In the context of a redesignation, the Area has shown that it has attained the standard. Moreover, the State has shown and EPA has proposed to determine that attainment in this area is due to permanent and enforceable emissions reductions on all

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<sup>9</sup>See, e.g., "Approval and Promulgation of Implementation Plans for California – San Joaquin Valley PM-10 Nonattainment Area; Serious Area Plan for Nonattainment of the 24-Hour and Annual PM-10 Standards," 69 FR 30006 (May 26, 2004) (approving a PM10 attainment plan that impose controls on direct PM10 and NO<sub>x</sub> emissions and did not impose controls on SO<sub>2</sub>, VOC, or ammonia emissions).

<sup>10</sup>See, e.g., *Assoc. of Irrigated Residents v. EPA et al.*, 423 F.3d 989 (9<sup>th</sup> Cir. 2005).

precursors necessary to provide for continued attainment. It follows logically that no further control of additional precursors is necessary. Accordingly, EPA does not view the January 4, 2013 decision of the Court as precluding redesignation of the Delaware portion of the Philadelphia Area to attainment for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS at this time.

In sum, even if Delaware were required to address precursors for the Delaware portion of the Philadelphia Area under subpart 4 rather than under subpart 1, as interpreted in EPA's remanded PM<sub>2.5</sub> implementation rule, EPA would still conclude that the area had met all applicable requirements for purposes of redesignation in accordance with section 107(d)(3)(E)(ii) and (v).

## **V. EPA's Analysis of Delaware's Submittals**

EPA is proposing several rulemaking actions for the Area: (1) to redesignate the Delaware portion of the Area to attainment for both the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS; and (2) to approve into the Delaware SIP the associated maintenance plans for both the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS. EPA is also proposing in this rulemaking action to approve the 2007 comprehensive emissions inventory to satisfy section 172(c)(3) requirement for the 2006 24-hour PM<sub>2.5</sub> NAAQS, which is one of the criteria for redesignation. EPA's proposed approvals of the redesignation requests and maintenance plans for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS are based upon EPA's determination that the Area continues to attain both standards, which EPA is proposing in this rulemaking action, and that all other redesignation criteria have been met for the Delaware portion of the Area. The following is a description of how the Delaware's December 12, 2012 submittals satisfy the requirements of

section 107(d)(3)(E) of the CAA for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards.

## **A. Redesignation Requests**

### **1. Attainment**

On January 23, 2012, EPA published a direct final rulemaking (77 FR 3147) and companion notice of proposed rulemaking (NPR) (77 FR 3223), proposing to determine that the Philadelphia Area attained the 1997 PM<sub>2.5</sub> NAAQS by its attainment date and that the Philadelphia Area continued to attain the 1997 annual PM<sub>2.5</sub> standard. Because EPA received adverse comments, EPA withdrew the direct final rule on March 13, 2012 (77 FR 14697), and the direct final rule was converted to a proposed rule. In a final rulemaking action dated May 16, 2012 (77 FR 28782), EPA determined that the entire Philadelphia Area attained the 1997 annual PM<sub>2.5</sub> NAAQS by its applicable attainment date, based upon quality-assured and certified ambient air quality monitoring data for the period of 2007-2009, and continued to attain that standard based upon quality-assured and certified ambient air quality monitoring data for the period of 2008-2010. In a separate rulemaking action dated January 7, 2013 (78 FR 882), EPA also determined that the Philadelphia Area has attained the 2006 24-hour PM<sub>2.5</sub> standard, based on quality-assured and certified ambient air quality monitoring data for 2008-2010 and 2009-2011. The basis and effect of these determinations of attainment for both the 1997 and 2006 PM<sub>2.5</sub> NAAQS were discussed in the notices of the proposed (77 FR 3147 and 77 FR 60089, respectively) and final (77 FR 28782 and 78 FR 882, respectively) rulemakings.

EPA has reviewed the ambient air quality PM<sub>2.5</sub> monitoring data in the Philadelphia Area, consistent with the requirements contained at 40 CFR part 50, and recorded in EPA's Air Quality

System (AQS), including quality-assured, quality-controlled, and state-certified data for the monitoring periods 2009-2011 and 2010-2012 and preliminary data for 2011-2013. The air quality data show that the Philadelphia Area continues to attain both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. The Area's annual and 24-hour PM<sub>2.5</sub> design values<sup>11</sup> are provided in Tables 1 and 2, respectively.

**Table 1. Philadelphia Area's Annual Design Values for the 2006 24-hour PM<sub>2.5</sub> Standard for the 2010-2012 and 2011-2013 Monitoring Periods, in µg/m<sup>3</sup>**

State	County	Annual Design Values		
		2009-2011	2010-2012	Preliminary 2011-2013
Delaware	New Castle	10.7	10.4	9.9
New Jersey	Camden	9.7	9.7	9.9
	Burlington	No monitor		
	Gloucester	9.7	9.5	9.3
Pennsylvania	Bucks	10.9	10.9	10.8
	Chester	13.7	12.3	11.1
	Delaware	12.7	13.1	12.3
	Montgomery	10.1	9.8	9.7
	Philadelphia	11.4	11.0	10.9
<b>Area's Annual Design Value</b>		<b>13.7</b>	<b>13.1</b>	<b>12.3</b>

Source: EPA AQS

<sup>11</sup> As defined in 40 CFR part 50, Appendix N, section (1)(c).

**Table 2. Philadelphia Area's 24-Hour Design Values for the 2006 24-hour PM<sub>2.5</sub> Standard for the 2010-2012 and 2011-2013 Monitoring Periods, in µg/m<sup>3</sup>**

State	County	24-Hour Design Values		
		2009-2011	2010-2012	Preliminary 2011-2013
Delaware	New Castle	27	26	24
New Jersey	Camden	24	23	25
	Burlington	No monitor		
	Gloucester	22	22	23
Pennsylvania	Bucks	28	29	29
	Chester	33	31	28
	Delaware	30	31	29
	Montgomery	27	25	24
	Philadelphia	29	28	29
<b>Area's Annual Design Value</b>		<b>33</b>	<b>31</b>	<b>29</b>

Source: EPA AQS

EPA's review of the monitoring data for 2009-2011, 2010-2012 supports EPA's previous determinations that the Area has attained the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS, and that the Area continues to attain both standards. Preliminary 2013 data is consistent with attainment. Please note that preliminary 2013 data is uncertified. States are required to certify 2013 data by May 1, 2014. In addition, as discussed subsequently, with respect to the maintenance plan, Delaware has committed to continue monitoring ambient PM<sub>2.5</sub> concentrations in accordance with 40 CFR part 58. Thus, EPA is proposing to determine that the Philadelphia Area continues to attain the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS.

## **2. The Area has Met All Applicable Requirements under Section 110 and Subpart 1 of the CAA and has a Fully Approved SIP under Section 110(k)**

In accordance with section 107(d)(3)(E)(v), the SIP revisions for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards for the Delaware portion of the Philadelphia Area must be fully approved under section 110(k) and all the requirements applicable to the Area under section 110 of the CAA (general SIP requirements) and part D of Title I of the CAA (SIP requirements for nonattainment areas) must be met.

### **a. Section 110 General SIP Requirements**

Section 110(a)(2) of Title I of the CAA delineates the general requirements for a SIP, which include enforceable emissions limitations and other control measures, means, or techniques, provisions for the establishment and operation of appropriate devices necessary to collect data on ambient air quality, and programs to enforce the limitations. The general SIP elements and requirements set forth in section 110(a)(2) include, but are not limited to the following:

- Submittal of a SIP that has been adopted by the state after reasonable public notice and hearing;
- Provisions for establishment and operation of appropriate procedures needed to monitor ambient air quality;
- Implementation of a source permit program; provisions for the implementation of Part C requirements (PSD);
- Provisions for the implementation of Part D requirements for NSR permit programs;
- Provisions for air pollution modeling; and
- Provisions for public and local agency participation in planning and emission control rule



development.

Section 110(a)(2)(D) of the CAA requires that SIPs contain certain measures to prevent sources in a state from significantly contributing to air quality problems in another state. To implement this provision for various NAAQS, EPA has required certain states to establish programs to address transport of air pollutants in accordance with EPA's Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone (63 FR 57356, October 27, 1998), also known as the NO<sub>x</sub> (oxides of nitrogen) SIP Call; amendments to the NO<sub>x</sub> SIP Call (64 FR 26298, May 14, 1999 and 65 FR 11222, March 2, 2000), and CAIR (70 FR 25162, May 12, 2005). However, section 110(a)(2)(D) requirements for a state are not linked with a particular nonattainment area's designation and classification in that state. EPA believes that the requirements linked with a particular nonattainment area's designation and classifications are the relevant measures to evaluate in reviewing a redesignation request. The transport SIP submittal requirements, where applicable, continue to apply to a state regardless of the designation of any one particular area in the state. Thus, EPA does not believe that these requirements are applicable requirements for purposes of redesignation.

In addition, EPA believes that the other section 110(a)(2) elements not connected with nonattainment plan submissions and not linked with an area's attainment status are not applicable requirements for purposes of redesignation. The Philadelphia Area will still be subject to these requirements after it is redesignated. EPA concludes that the section 110(a)(2) and part D requirements which are linked with a particular area's designation and classification

are the relevant measures to evaluate in reviewing a redesignation request, and that section 110(a)(2) elements not linked to the area's nonattainment status are not applicable for purposes of redesignation. This approach is consistent with EPA's existing policy on applicability of conformity (i.e., for redesignations) and oxygenated fuels requirement. *See* Reading, Pennsylvania, proposed and final rulemakings (61 FR 53174, October 10, 1996), (62 FR 24826, May 7, 1997); Cleveland-Akron-Lorain, Ohio final rulemaking (61 FR 20458, May 7, 1996); and Tampa, Florida, final rulemaking (60 FR 62748, December 7, 1995). *See also*, the discussion on this issue in the Cincinnati, Ohio redesignation (65 FR at 37890, June 19, 2000), and in the Pittsburgh-Beaver Valley, Pennsylvania redesignation (66 FR at 53099, October 19, 2001).

EPA has reviewed the Delaware SIP and has concluded that it meets the general SIP requirements under section 110(a)(2) of the CAA to the extent they are applicable for purposes of redesignation. EPA has previously approved provisions of Delaware's SIP addressing section 110(a)(2) requirements, including provisions addressing PM<sub>2.5</sub>. *See* (76 FR 47068, August 4, 2011 and 76 FR 53638, August 29, 2011). These requirements are, however, statewide requirements that are not linked to the PM<sub>2.5</sub> nonattainment status of the Philadelphia Area. Therefore, EPA believes that these SIP elements are not applicable requirements for purposes of review of the State's PM<sub>2.5</sub> redesignation requests.

#### **b. Subpart 4 Requirements**

Subpart 1 sets forth the basic nonattainment plan requirements applicable to PM<sub>2.5</sub> nonattainment areas. Under section 172, states with nonattainment areas must submit plans providing for timely attainment and must meet a variety of other requirements.

The General Preamble for Implementation of Title I discusses the evaluation of these requirements in the context of EPA's consideration of a redesignation request. The General Preamble sets forth EPA's view of applicable requirements for purposes of evaluating redesignation requests when an area is attaining the standard. *See* 57 FR 13498, April 16, 1992.

As mentioned previously, on May 16, 2012 (77 FR 28782), EPA made a determination that the Philadelphia Area had attained the 1997 annual PM<sub>2.5</sub> NAAQS. This determination of attainment was based upon quality-assured and certified ambient air quality monitoring data for the period of 2007-2009 showing that the entire Area had attained the standard by its applicable attainment date, and 2008-2010 data showing that the Area continued to attain the standard. In a separate rulemaking action, dated January 7, 2013 (78 FR 882), EPA made a determination of attainment for the Philadelphia Area for the 2006 24-hour PM<sub>2.5</sub> NAAQS, based on quality-assured and certified ambient air quality monitoring data for the 2008-2010 and 2009-2011 monitoring periods.

Pursuant to 40 CFR 51.2004(c), upon these determinations by EPA that the Area has attained the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS, the requirement for Delaware to submit for the Philadelphia Area an attainment demonstration and associated RACM, a RFP plan, contingency measures, and other planning SIPs related to the attainment of the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS were suspended until the Area is redesignated to attainment for each standard or EPA determines that the Area has again violated any of the standards, at which time such plans are required to be submitted. Thus, because attainment has been reached for the Area

for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS and the Area continues to attain both standards, no additional measures are needed to provide for attainment. Therefore, the requirements of section 172(c)(1), 172(c)(2), 172(c)(6), and 172(c)(9) are no longer considered to be applicable for purposes of redesignation of the Area for both standards.

However, determinations of attainment do not preclude states from submitting and EPA from approving planning SIP revisions for the 1997 or 2006 PM<sub>2.5</sub> NAAQS. On April 3, 2008, DNREC submitted an attainment plan for the Delaware portion of the Philadelphia Area for the 1997 annual PM<sub>2.5</sub> NAAQS, which included a 2002 comprehensive emissions inventory. On April 25, 2012, DNREC submitted a SIP revision to replace the MVEBs in the April 3, 2008 submittal with a budget that is based on the Motor Vehicle Emissions Simulator (MOVES) model. On December 17, 2013 (78 FR 76209), EPA approved Delaware's attainment plan for the 1997 PM<sub>2.5</sub> NAAQS for the Delaware portion of the Philadelphia Area and MVEBs for transportation conformity purposes for New Castle County, Delaware submitted on April 3, 2008 and April 25, 2012.

Section 172(c)(4) of the CAA requires the identification and quantification of allowable emissions for major new and modified stationary sources in an area, and section 172(c)(5) requires source permits for the construction and operation of new and modified major stationary sources anywhere in the nonattainment area. EPA has determined that, since PSD requirements will apply after redesignation, areas being redesignated need not comply with the requirement that a nonattainment NSR program be approved prior to redesignation, provided that the area demonstrates maintenance of the NAAQS without part D NSR. A more detailed rationale for

this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, entitled, “Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment.” Nevertheless, Delaware currently has an approved NSR program, including an approved PSD program, codified in the State’s regulation at 7 DE Admin. Code 1125, “Requirements for Preconstruction Review.” *See* (77 FR 60053, October 2, 2012) and (78 FR 13496, February 28, 2013). The State’s PSD program for PM<sub>2.5</sub> will become effective in the Philadelphia Area upon redesignation to attainment.

Section 172(c)(7) of the CAA requires the SIP to meet the applicable provisions of section 110(a)(2). As noted previously, we believe the Delaware SIP meets the requirements of section 110(a)(2) that are applicable for purposes of redesignation.

As a result of EPA’s determinations of attainment of the Area for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS, respectively, the only remaining requirement under section 172 to be considered for each of the PM<sub>2.5</sub> standards is the comprehensive emissions inventory required under section 172(c)(3). Section 172(c)(3) of the CAA requires submission of a comprehensive, accurate, and current inventory of actual emissions. For purposes of the PM<sub>2.5</sub> NAAQS, this emissions inventory should address not only direct emissions of PM<sub>2.5</sub>, but also emissions of all precursors with the potential to participate in PM<sub>2.5</sub> formation, i.e., sulfur dioxide (SO<sub>2</sub>), NO<sub>x</sub>, volatile organic compounds (VOC) and ammonia.

DNREC’s April 3, 2008 attainment plan submittal for the 1997 annual PM<sub>2.5</sub> standard is relevant to this proposed rulemaking action to redesignate the Delaware portion of the Area only with

respect to the comprehensive emissions inventory requirement of section 172(c)(3) for the 1997 annual PM<sub>2.5</sub> standard. On March 4, 2013 (78 FR 14020), EPA approved the 2002 comprehensive emissions inventory included in the attainment plan for the 1997 annual PM<sub>2.5</sub> NAAQS, to meet the requirement of section 172(c)(3) for this standard. The 2002 comprehensive emissions inventory for the 1997 annual PM<sub>2.5</sub> standard includes emissions estimates that cover the general source categories of point sources, area sources, on-road mobile sources, and non-road mobile sources. The pollutants that comprise the 2002 emissions inventory are PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>2</sub>, VOC, and ammonia. An evaluation of Delaware's 2002 comprehensive emissions inventory for the Philadelphia portion of the Area is provided in the Technical Support Document (TSD) prepared by EPA for the rulemaking action. *See* Docket ID No. EPA-R03-OAR-2010-0141.

To satisfy the 172(c)(3) requirement for the 2006 24-hour PM<sub>2.5</sub> standard, Delaware's December 12, 2012 redesignation request and maintenance plan for the 2006 24-hour PM<sub>2.5</sub> standard contains a 2007 comprehensive emissions inventories. DNREC had previously prepared the 2007 inventory for the Delaware portion of the Philadelphia Area for modeling and SIP purposes. DNREC is using that 2007 inventory as the base year inventory for the 2006 24-hour PM<sub>2.5</sub> standard, because 2007 is one of the three years used to designate the Philadelphia nonattainment area for the 2006 24-hour PM<sub>2.5</sub> standard. DNREC has submitted that 2007 emissions inventory to fulfill its obligation to submit a comprehensive inventory under Clean Air Act section 172(c)(3), because that inventory has gone through extensive quality assurance. The 2007 emissions inventory is the most current accurate and comprehensive emissions inventory of direct PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>2</sub>, VOC, and ammonia for the Area. Thus, as part of this rulemaking

action, EPA is proposing to approve Delaware’s 2007 comprehensive emissions inventory for the 2006 24-hour PM<sub>2.5</sub> NAAQS as satisfying the requirement of section 172(c)(3) of the CAA for this standard. Final approval of the 2007 base year emissions inventory will satisfy the emissions inventory requirement under section 172(c)(3) of the CAA for the 2006 24-hour PM<sub>2.5</sub> NAAQS.

The 2007 comprehensive emissions inventory addresses the general source categories of point sources, area sources, on-road mobile sources, and non-road mobile sources. A summary of the 2007 comprehensive emissions inventory is provided in Table 3. EPA has reviewed the documentation provided by DNREC and found the 2007 emissions inventory to be approvable. For more information on EPA’s analysis of the 2007 emissions inventory, *see* the TSDs prepared by the EPA Region III Office of Air Monitoring and Analysis and both dated January 28, 2014, “Technical Support Document (TSD) for the Redesignation Request and Maintenance Plan for the New Castle County Portion of the Philadelphia-Wilmington, PA-NJ-DE 1997 PM<sub>2.5</sub> Nonattainment Area” and “Technical Support Document (TSD) for the Redesignation Request and Maintenance Plan for the New Castle County Portion of the Philadelphia-Wilmington, PA-NJ-DE 2006 PM<sub>2.5</sub> Nonattainment Area” (“Inventory TSDs”), available in the docket for this rulemaking action at [www.regulations.gov](http://www.regulations.gov). *See* Docket ID No. EPA-R03-OAR-2014-0022.

**Table 3. Summary of 2007 Comprehensive Inventory for New Castle County, in tons per year (tpy)**

<b>Sector</b>	<b>Direct PM<sub>2.5</sub></b>	<b>NO<sub>x</sub></b>	<b>SO<sub>2</sub></b>	<b>VOC</b>	<b>Ammonia</b>
<b>Point</b>	1,335	6,635	13,380	1,727	64
<b>Non-point</b>	1,207	1,293	630	4,795	653
<b>On-road</b>	324	10,577	100	4,298	243
<b>Non-road</b>	327	4,580	1,118	2,490	2
<b>Total</b>	<b>3,193</b>	<b>23,084</b>	<b>15,228</b>	<b>13,310</b>	<b>962</b>

Section 175A requires a state seeking redesignation to attainment to submit a SIP revision to provide for the maintenance of the NAAQS in the area “for at least 10 years after the redesignation.” In conjunction with its request to redesignate the Delaware portion of the Area to attainment status, Delaware submitted SIP revisions to provide for maintenance of the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS in the Delaware portion of the Area for at least 10 years after redesignation, throughout 2025. Delaware is requesting that EPA approve this SIP revision as meeting the requirement of CAA section 175A. Once approved, the maintenance plans for the Delaware portion of the Area will ensure that the SIP for Delaware meets the requirements of the CAA regarding maintenance of the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS for the Delaware portion of the Area. EPA’s analysis of the maintenance plans is provided in section V.B. of this rulemaking action.

Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that Federally supported or funded projects conform to the air quality planning goals in the applicable SIP. The requirement to determine conformity applies to transportation plans, programs, and projects that are developed, funded or approved under title 23 of the United States Code (U.S.C.) and the Federal Transit Act (transportation conformity) as well as to all other Federally supported or funded projects (general conformity). State transportation conformity SIP revisions must be consistent with Federal conformity regulations relating to consultation, enforcement and enforceability which EPA promulgated pursuant to its authority under the CAA. EPA interprets the conformity SIP requirements as not applying for purposes of evaluating a redesignation request under CAA section 107(d) because state conformity rules are still required after



redesignation, and Federal conformity rules apply where state rules have not been approved. *See Wall v. EPA*, 265 F. 3d 426 (6<sup>th</sup> Cir. 2001) (upholding this interpretation) and (60 FR 62748, December 7, 1995) (discussing Tampa, Florida).

Thus, for purposes of redesignating to attainment the Delaware portion of the Philadelphia Area for the 1997 annual PM<sub>2.5</sub> NAAQS, EPA determines that Delaware has met all the applicable SIP requirements under part D of Title I of the CAA. EPA also determines that upon final approval of the 2007 comprehensive emissions inventory as proposed in this rulemaking action, Delaware will also meet all the applicable SIP requirements under part D of Title I of the CAA for purposes of redesignating the Area to attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS.

**c. The Delaware Portion of the Area has a Fully Approved Applicable SIP Under Section 110(k) of the CAA**

For purposes of redesignation to attainment for the 1997 annual PM<sub>2.5</sub> NAAQS, EPA has fully approved all applicable requirements of Delaware's SIP for the Area in accordance with section 110(k) of the CAA. Upon final approval of the 2007 comprehensive emissions inventory as proposed in this rulemaking action, EPA will have fully approved all applicable requirements of Delaware's SIP for the Area for purposes of redesignation to attainment for the 2006 24-hour PM<sub>2.5</sub> NAAQS in accordance with section 110(k) of the CAA.

**3. Permanent and Enforceable Reductions in Emissions**

For redesignating a nonattainment area to attainment, section 107(d)(3)(E)(iii) requires EPA to determine that the air quality improvement in the area is due to permanent and enforceable

reductions in emissions resulting from implementation of the SIP and applicable Federal air pollution control regulations and other permanent and enforceable reductions. Delaware has calculated the change in emissions between 2002, a year showing nonattainment for the 1997 annual PM<sub>2.5</sub> standard in the Delaware portion of the Philadelphia Area, and 2007, one of the years for which the Philadelphia Area monitored attainment for the 1997 annual PM<sub>2.5</sub> standard. Delaware did the same analysis for the 2006 24-hour PM<sub>2.5</sub> standard, using 2007 as a year showing nonattainment for the 2006 24-hour PM<sub>2.5</sub> standard in the Delaware portion of the Philadelphia Area, and 2008, one of the years for which the Philadelphia Area monitored attainment for the 2006 24-hour PM<sub>2.5</sub> standard.

A summary of the emissions reductions of direct PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub> from 2002 to 2007 in the Delaware portion of the Philadelphia Area, submitted by DNREC, is provided in Table 4a. A summary of the emissions reductions of direct PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub> from 2007 to 2008, submitted by DNREC, is provided in Table 4b. For more information on EPA's analysis of the 2007 and 2008 emissions inventories, see EPA's Inventory TSDs, dated January 28, 2014, available in the docket for this rulemaking action at [www.regulations.gov](http://www.regulations.gov).

**Table 4a. Emission Reductions from 2002 to 2007 in the Delaware Portion of the Philadelphia Area (tpy)**

	<b>Sector</b>	<b>2002</b>	<b>2007</b>	<b>Net Reduction 2002-2007</b>	<b>Percent Reduction 2002-2007</b>
<b>Direct PM<sub>2.5</sub></b>	Point	1,733	1,335	398	23%
	Non-point	1,073	1,207	-134	-12%
	On-road	209	324	-115	-55%
	Non-road	415	327	88	21%
	<b>Total</b>	<b>3,430</b>	<b>3,193</b>	<b>237</b>	<b>7%</b>
<b>NO<sub>x</sub></b>	Point	9,157	6,635	2,522	28%
	Non-point	1,513	1,293	220	15%
	On-road	11,799	10,577	1,222	10%
	Non-road	8,279	4,580	3,699	45%
	<b>Total</b>	<b>30,748</b>	<b>23,084</b>	<b>7,664</b>	<b>25%</b>
<b>SO<sub>2</sub></b>	Point	47,070	13,380	33,690	72%
	Non-point	780	630	150	19%
	On-road	326	100	226	69%
	Non-road	2,061	1,118	943	46%
	<b>Total</b>	<b>50,237</b>	<b>15,228</b>	<b>35,009</b>	<b>70%</b>

**Table 4b. Emission Reductions from 2007 to 2008 in the Delaware Portion of the Philadelphia Area (tpy)**

	<b>Sector</b>	<b>2007</b>	<b>2008</b>	<b>Net Reduction 2007-2008</b>	<b>Percent Reduction 2007-2008</b>
<b>Direct PM<sub>2.5</sub></b>	Point	1,335	1,109	226	17%
	Non-point	1,207	1,191	16	1%
	On-road	324	283	42	13%
	Non-road	327	312	15	5%
	<b>Total</b>	<b>3,193</b>	<b>2,894</b>	<b>300</b>	<b>9%</b>
<b>NO<sub>x</sub></b>	Point	6,635	5,589	1,046	16%
	Non-point	1,293	1,287	6	0%
	On-road	10,577	9,311	1,266	12%
	Non-road	4,580	4,317	263	6%
	<b>Total</b>	<b>23,084</b>	<b>20,504</b>	<b>2,580</b>	<b>11%</b>
<b>SO<sub>2</sub></b>	Point	13,380	10,576	2,805	21%
	Non-point	630	402	228	36%
	On-road	100	94	6	6%
	Non-road	1,118	1,067	51	5%
	<b>Total</b>	<b>15,228</b>	<b>12,139</b>	<b>3,089</b>	<b>20%</b>

The reduction in emissions and the corresponding improvement in air quality from 2002 to 2007 and from 2007 to 2008, for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS, respectively, in the Philadelphia Area can be attributed to a number of regulatory control measures that have been implemented in the Area and contributing areas in recent years.

In Sections 4.3, Enforceable and Permanent PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub> Measures that Contributed to Improved Air Quality, of Delaware's redesignation requests and maintenance plans for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub>, DNREC makes demonstrations that numerous permanent and enforceable state and federal control measures achieved emission reductions that resulted in improved air quality in the Philadelphia Area. The following is a list of the permanent and enforceable control measures.

**a. Delaware-Specific Control Measures**

- 7 DE Admin. Code 1144, Control of Stationary Generator Emissions. This statewide regulation controls SO<sub>2</sub>, PM, VOC, and NO<sub>x</sub> emissions. The regulation was effective in January 2006, and was approved into Delaware's SIP on August 11, 2010 (75 FR 48566).
- 7 DE Admin. Code 1148, Control of Stationary Combustion Turbine Electric Generating Unit Emissions. This statewide regulation controls NO<sub>x</sub> emissions, and was effective in July 2007. EPA approved this regulation into the Delaware SIP on August 11, 2010 (75 FR 48566).
- 7 DE Admin. Code 1142. EPA approved this rule, which controls NO<sub>x</sub> emissions, into the Delaware SIP on November 22, 2002 (67 FR 70315). Section 1 of this rule, Control of NO<sub>x</sub> Emissions from Industrial Boilers, is applicable state-wide, and was effective in December 2001. Section 2, Control of NO<sub>x</sub> Emissions from Industrial Boilers and

Process Heaters at Petroleum Refineries, is applicable in New Castle County. DNREC revised Section 2, effective July 2007. EPA approved the revisions to Section 2 into the Delaware SIP on May 15, 2012 (77 FR 28489).

- 7 DE Admin. Code 1131, Low Enhanced Inspection and Maintenance (I/M). Delaware's enhanced I/M program is applicable in New Castle and Kent Counties, and was approved into the Delaware SIP by EPA on September 30, 1999 (64 FR 52657). Revisions to the enhanced I/M program were approved by EPA on November 26, 2003 (68 FR 228).

Please note that for Delaware's redesignation request for the 1997 annual PM<sub>2.5</sub> NAAQS, the following additional control measure was also included.

#### Delaware-specific Control Measures

- Consent Decree with Premcor Refinery at Delaware City (formerly Motiva Enterprises), New Castle County, Control of SO<sub>2</sub>, and NO<sub>x</sub> Emissions from Boilers and Heaters, Effective 2006, Civil Action No. H-01-0978. This federal consent decree was lodged in the United States Court for the Southern District of Texas on March 21, 2001.

#### **b. Federal Measures Implemented**

- EPA's New Source Performance Standards for Woodstoves (NSPS), 40 CFR part 60, subpart AAA.
- Control of Emissions from New and In-Use non-road Compression Engines, 40 CFR part 89.
- Control of Air Pollution; Determination of Significance for Non-road Sources and

Emission Standards for New Non-road Compression Ignition Engines at or Above 37 Kilowatts (59 FR 31036, June 17, 1994).

- Emissions for New Non-road Spark-Ignition Engines At or Below 19 Kilowatts (60 FR 34581, July 3, 1995).
- Final Rule for New Gasoline Spark-Ignition Marine Engines; Exemptions for New Non-road Compression-Ignition Engines at or Above 37 Kilowatts and New Non-road Spark-Ignition Engines at or Below 19 Kilowatts (61 FR 52088, October 4, 1996).
- Control of Emissions of Air Pollution from Non-road Diesel Engines (63 FR 56967, October 23, 1998).
- Phase 2 Emission Standards for New Non-road Non-handheld Spark Ignition Engines At or Below 19 Kilowatts (64 FR 15207, March 30, 1999).
- Phase 2 Emission Standards for New Non-road Spark-Ignition Handheld Engines At or Below 19 Kilowatts and Minor Amendments to Emission Requirements Applicable to Small Spark-Ignition Engines and Marine Spark-Ignition Engines (65 FR 24268, April 25, 2000).
- Control of Emissions from Non-road Large Spark-Ignition Engines and Recreational Engines (Marine and Land-Based), (67 FR 68241, November 8, 2002).
- Control of Emissions of Air Pollution from Non-road Diesel Engines and Fuel (Clean Air Non-road Diesel Rule – Tier 4), (69 FR 38958, June 29, 2004).
- Control of Emissions from Non-road Spark-Ignition Engines and Equipment (Bond Rule), (73 FR 59034, October 8, 2008).
- Heavy-Duty Highway Rule, 40 CFR part 86, Subpart P.
- Federal Tier 1 New Vehicle Emission and New Federal Evaporative Emission Standards.

- The Tier 2 vehicle and gasoline sulfur program, Subpart H of 40 CFR part 80, 40 CFR part 85, and 40 CFR part 86.
- Ozone Transport Commission (OTC) National Low Emission Vehicle Program (NLEV).

EPA has reviewed both redesignation requests and maintenance plans for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards and found that DNREC has demonstrated that it has controlled emissions of PM<sub>2.5</sub> and its precursors through numerous permanent and enforceable emission control measures, resulting in permanent and enforceable emission reductions adequate to attain both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. Therefore, DNREC has met this criterion for redesignation. However, in a separate rulemaking action, published on February 22, 2013, EPA identified deficiencies associated with several regulations within the approved Delaware SIP including a specific provision within 7-1100-1142 Del. Code Regs §2 (Regulation 1142, Section 2.0, Control of Nitrogen Oxide (NO<sub>x</sub>) Emissions from Industrial Boilers and Process Heaters at Petroleum Refineries). *See* 78 FR 12460. In that proposed rulemaking action, EPA identified specific Delaware regulations in which state officials are provided unbounded discretion to set alternative emission limits during periods of start-up and shutdown of equipment through a permitting process that does not entail subsequent approval of the alternative emission limits through a SIP submission. EPA has proposed to find that this process constitutes an impermissible director's discretion provision with the potential to allow impermissible discretionary exemptions from SIP emission limits. *See* 78 FR 12495-12496. EPA will be taking a separate final action on the February 22, 2013 proposed rulemaking action.

EPA's analysis indicates that Regulation 1142, Section 2.0 is not necessary for attainment of the Philadelphia Area. The Philadelphia Area is attaining the 1997 annual and 2006 24-hour PM<sub>2.5</sub>

NAAQS. The Philadelphia Area came into attainment of the 1997 annual NAAQS in 2009, considering 2007-2009 ambient air quality monitoring data (77 FR 28782), and continues to meet that standard. The Philadelphia Area came into attainment for the 2006 24-hour standard in 2010, considering 2008-2010 data (78 FR 882), and continues to meet that standard. Furthermore, actual emission reductions of PM<sub>2.5</sub> and its precursors have been achieved between the base years and the attainment years for both standards. For the 1997 NAAQS, NO<sub>x</sub> has decreased in the Delaware portion of the Philadelphia Area from 30,748 tpy in 2002 to 23,084 tpy in 2007. For the 2006 NAAQS, NO<sub>x</sub> has decreased in the Delaware portion of the Philadelphia Area from 23,084 tpy in 2007 to 20,504 tpy in 2008.

Regulation 1142 Section 2.0 applies to NO<sub>x</sub> emissions at petroleum refineries. There is only one such petroleum refinery in Delaware, and it is subject to a federally-enforceable consent decree and several consent decree addendums between the source and EPA which limit NO<sub>x</sub> emissions and require NO<sub>x</sub> control measures at several units at the refinery. Therefore, EPA is not relying upon Regulation 1142 Section 2.0 in its evaluation of the permanent and enforceable attainment measures. Through numerous permanent and enforceable regulations, which are incorporated into Delaware's SIP, Delaware has regulated and is continuing to regulate sources of PM<sub>2.5</sub> and its precursors in the Philadelphia Area. Taking into consideration existing regulations, including those listed earlier in this rulemaking action, which Delaware included in Sections 4.3 of its redesignation requests and maintenance plans, (with the exception of Regulation 1142 Section 2.0), EPA has concluded that the Philadelphia Area has attained the 1997 and 2006 PM<sub>2.5</sub> NAAQS and that Delaware has shown that attainment of these standards is due to permanent and enforceable emission reductions.



For more information on EPA's analysis, please refer to EPA's TSD, available in the docket for this rulemaking action at [www.regulations.gov](http://www.regulations.gov). See Docket ID No. EPA-R03-OAR-2014-0022.

## **B. Maintenance Plans**

On December 12, 2012, DNREC submitted maintenance plans for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS, as required by section 175A of the CAA. EPA's analysis for proposing approval of the maintenance plans is provided in this section.

### **1. Attainment Emissions Inventories**

An attainment inventory is comprised of the emissions during the time period associated with the monitoring data showing attainment. DNREC determined that the appropriate attainment inventory year for the maintenance plan for the 1997 annual PM<sub>2.5</sub> NAAQS is 2007, one of the years in the periods during which the Philadelphia Area monitored attainment of the 1997 annual PM<sub>2.5</sub> NAAQS. DNREC determined that the appropriate attainment inventory year for the maintenance plan for the 2006 24-hours PM<sub>2.5</sub> NAAQS is 2008, one of the years in the periods during which the Philadelphia Area monitored attainment of the 24-hour PM<sub>2.5</sub> NAAQS. The 2007 and 2008 inventory included in the maintenance plans contains primary PM<sub>2.5</sub> emissions (including condensables), SO<sub>2</sub>, and NO<sub>x</sub>. The underlying emissions data DNREC submitted to support the 2007 and 2008 inventories contains the additional PM<sub>2.5</sub> precursors, ammonia and VOCs.

In its redesignation requests and maintenance plans for the 1997 annual and 2006 24-hour PM<sub>2.5</sub>

standards, DNREC described the methods used for developing its 2007 and 2008 inventories. EPA reviewed the procedures used to develop the projected inventories and found them to be reasonable. EPA has reviewed the documentation provided by DNREC and found the 2007 and 2008 emissions inventories submitted with the maintenance plans to be approvable. For more information on EPA's analysis of the 2007 and 2008 emissions inventories, *see* EPA's Inventory TSDs, dated January 28, 2014, available in the docket for this rulemaking action at [www.regulations.gov](http://www.regulations.gov).

## **2. Maintenance Demonstration**

Section 175A requires a state seeking redesignation to attainment to submit a SIP revision to provide for the maintenance of the NAAQS in the area "for at least 10 years after the redesignation." EPA has interpreted this as a showing of maintenance "for a period of ten years following redesignation." Where the emissions inventory method of showing maintenance is used, its purpose is to show that emissions during the maintenance period will not increase over the attainment year inventory. *See* 1992 Calcagni Memorandum, pages 9-10.

For a demonstration of maintenance, emissions inventories are required to be projected to future dates to assess the influence of future growth and controls; however, the demonstration need not be based on modeling. *See Wall v. EPA, supra; Sierra Club v. EPA, supra. See also* 66 FR 53099-53100 and 68 FR 25430-32. DNREC uses projection inventories to show that the Delaware portion of the Area will remain in attainment and developed projection inventories for an interim year of 2017 and a maintenance plan end year of 2025 to show that future emissions of NO<sub>x</sub>, SO<sub>2</sub>, and direct PM<sub>2.5</sub> will remain at or below the attainment year 2007 and 2008

attainment-level emissions levels, for the 1997 annual and 2006 24-hour PM<sub>2.5</sub>, respectively, throughout the Delaware portion of the Area through the year 2025.

EPA has reviewed the documentation provided by DNREC for developing annual 2017 and 2025 emissions inventories for the Delaware portion of the Area. EPA has determined that the 2017 and 2025 projected emissions inventories provided by DNREC are approvable. For more information on EPA's analysis of the emissions inventories, *see* EPA's Inventory TSDs, dated January 28, 2014, available in the docket for this rulemaking action at [www.regulations.gov](http://www.regulations.gov).

Tables 5a, 6a, and 7a provide a summary of the direct PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub>, respectively, emissions inventories for the Delaware portion of the Philadelphia Area for the 2007 attainment year, the 2017 interim year, and the 2025 maintenance plan end year for the 1997 annual PM<sub>2.5</sub> NAAQS. Tables 5b, 6b, and 7b provide a summary of the direct PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub>, respectively, emissions inventories for the entire Philadelphia Area for the 2007 attainment year, the 2017 interim year, and the 2025 maintenance plan end year for the 1997 annual PM<sub>2.5</sub> NAAQS. The inventories show that, between 2007 and 2025, the Area is projected to reduce direct PM<sub>2.5</sub> emissions by 9,055 tpy, NO<sub>x</sub> emissions by 106,099 tpy, and SO<sub>2</sub> emissions by 34,265 tpy. Thus, the projected emissions inventories show that the Delaware portion of the Philadelphia Area will continue to maintain the 1997 annual PM<sub>2.5</sub> standards during the maintenance period. Note that the emission projections for the Delaware portion of the Area contain subcategories for point source and non-road emissions sources. "Non-road, MAR" refers to Marine Vessels, Aircraft and Locomotives (MAR). "Non-road, NMIM" refers to emissions sources covered by the National Mobile Inventory Model (NMIM). Point source

emissions are reported as either from electric generating units (EGUs) or from non-EGU point sources.

**Table 5a. Comparison of 2007, 2017, and 2025 Emissions of Direct PM<sub>2.5</sub> for the Delaware Portion of the Philadelphia Area (tpy)**

Sector	Direct PM <sub>2.5</sub>						
	2007	2017	2025	2007-2017		2007-2025	
				Reduction	Percent Reduction	Reduction	Percent Reduction
Non-point	1,207	1,235	1,310	-28	-2.3%	-103	-8.5%
Non-road, MAR	171	61	44	110	64.2%	126	74.0%
Non-road, NMIM	156	106	103	51	32.5%	53	34.0%
On-road	324	199	199	125	38.6%	125	38.6%
Point, EGU	519	502	520	17	3.2%	-1	-0.2%
Point, non-EGU	816	742	716	75	9.1%	100	12.2%
<b>Total</b>	<b>3,193</b>	<b>2,844</b>	<b>2,893</b>	<b>349</b>	<b>11%</b>	<b>301</b>	<b>9%</b>

**Table 5b. Comparison of 2007, 2017, and 2025 Emissions of Direct PM<sub>2.5</sub> for the Entire Philadelphia Area (tpy)**

Sector	Direct PM <sub>2.5</sub>				
	2007	2017	2025	2007- 2025	
				Reduction	Percent Reduction
Point	4,573	3,825	3,875	698	15.3%
Non-point	17,879	13,358	12,983	4,897	27.4%
On-road	3,795	2,488	1,443	2,352	62.0%
Non-road	2,466	1,606	1,357	1,109	45.0%
<b>Total</b>	<b>28,713</b>	<b>21,277</b>	<b>19,657</b>	<b>9,055</b>	<b>31.5%</b>

**Table 6a. Comparison of 2007, 2017, and 2025 Emissions of NO<sub>x</sub> for the Delaware Portion of the Philadelphia Area (tpy)**

Sector	NO <sub>x</sub>						
	2007	2017	2025	2007-2017		2007-2025	
				Reduction	Percent Reduction	Reduction	Percent Reduction
Non-point	1,293	1,295	1,296	-3	-0.2%	-3	-0.2%
Non-road, MAR	2,825	1,810	1,279	1,015	35.9%	1,546	54.7%
Non-road, NMIM	1,755	997	837	758	43.2%	918	52.3%
On-road	10,577	6,273	6,273	4,304	40.7%	4,304	40.7%
Point, EGU	2,865	1,698	1,758	1,167	40.7%	1,107	38.7%
Point, non-EGU	3,770	2,402	2,355	1,368	36.3%	1,415	37.5%
<b>Total</b>	<b>23,084</b>	<b>14,475</b>	<b>13,797</b>	<b>8,609</b>	<b>37%</b>	<b>9,287</b>	<b>40%</b>

**Table 6b. Comparison of 2007, 2017, and 2025 Emissions of NO<sub>x</sub> for the Entire Philadelphia Area (tpy)**

Sector	NO <sub>x</sub>				
	2007	2017	2025	2007-2025	
				Reduction	Percent Reduction
Point	31,759	13,049	19,817	11,942	37.6%
Non-point	18,043	17,528	17,741	302	1.7%
On-road	106,315	62,056	26,648	79,668	74.9%
Non-road	31,850	20,935	17,662	14,188	44.5%
<b>Total</b>	<b>187,967</b>	<b>113,568</b>	<b>81,868</b>	<b>106,099</b>	<b>56.4%</b>

**Table 7a. Comparison of 2007, 2017, and 2025 Emissions of SO<sub>2</sub> for the Delaware Portion of the Philadelphia Area (tpy)**

Sector	SO <sub>2</sub>						
	2007	2017	2025	2007-2017		2007-2025	
				Reduction	Percent Reduction	Reduction	Percent Reduction
Non-point	630	521	469	109	17.4%	161	25.6%
Non-road, MAR	1,027	112	37	915	89.1%	990	96.4%
Non-road, NMIM	91	2	3	89	97.3%	88	96.5%
On-road	100	98	98	2	2.4%	2	2.4%
Point, EGU	9,119	2,419	2,572	6,700	73.5%	6,547	71.8%
Point, non-EGU	4,261	3,843	3,780	418	9.8%	482	11.3%
<b>Total</b>	<b>15,228</b>	<b>6,995</b>	<b>6,958</b>	<b>8,234</b>	<b>54%</b>	<b>8,271</b>	<b>54%</b>

**Table 7b. Comparison of 2007, 2017, and 2025 Emissions of SO<sub>2</sub> for the Entire Philadelphia Area (tpy)**

Sector	SO <sub>2</sub>				
	2007	2017	2025	2007-2025	
				Reduction	Percent Reduction
Point	35035	13375	13553	21482	61.3
Non-point	16763	13466	9756	7007	41.8
On-road	773	578	422	351	45.4
Non-road	6134	851	709	5425	88.4
<b>Total</b>	<b>58705</b>	<b>28270</b>	<b>24440</b>	<b>34265</b>	<b>58.4</b>

Tables 8a, 9a, and 10a provide a summary of the direct PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub>, respectively,

emissions inventories for the Delaware portion of the Philadelphia Area for the 2008 attainment year, the 2017 interim year, and the 2025 maintenance plan end year for the 2006 24-hour PM<sub>2.5</sub> NAAQS. Tables 8b, 9b, and 10b provide a summary of the direct PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub>, respectively, emissions inventories for the entire Philadelphia Area for the 2007 attainment year, the 2017 interim year, and the 2025 maintenance plan end year for the 2006 24-hour PM<sub>2.5</sub> NAAQS. The inventories show that, between 2008 and 2025, the Area is projected to reduce direct PM<sub>2.5</sub> emissions by 6,287 tpy, NO<sub>x</sub> emissions by 73,606 tpy, and SO<sub>2</sub> emissions by 29,990 tpy. Thus, the projected emissions inventories show that the Delaware portion of the Philadelphia Area will continue to maintain the 2006 24-hour PM<sub>2.5</sub> standards during the maintenance period.

**Table 8a. Comparison of 2008, 2017, and 2025 Emissions of Direct PM<sub>2.5</sub> for the Delaware Portion of the Philadelphia Area (tpy)**

Sector	Direct PM <sub>2.5</sub>						
	2008	2017	2025	2008-2017		2008-2025	
				Reduction	Percent Reduction	Reduction	Percent Reduction
Non-point	1,191	1,247	1,327	-56	-4.7%	-136	-11.4%
Non-road, MAR	164	59	42	106	64.3%	122	74.3%
Non-road, NMIM	148	106	103	42	28.6%	45	30.2%
On-road	282	199	199	83	29.4%	83	29.4%
Point, EGU	396	410	427	-14	-3.5%	-32	-8.0%
Point, non-EGU	713	504	398	209	29.3%	315	44.1%
<b>Total</b>	<b>2,894</b>	<b>2,524</b>	<b>2,497</b>	<b>370</b>	<b>13%</b>	<b>396</b>	<b>14%</b>

**Table 8b. Comparison of 2008, 2017, and 2025 Emissions of Direct PM<sub>2.5</sub> for the Entire Philadelphia Area (tpy)**

Sector	Direct PM <sub>2.5</sub>				
	2008	2017	2025	2008-2025	
				Reduction	Percent Reduction
Point	4,790	4,006	4,058	731	15.3%
Non-point	11,935	8,917	8,667	3,269	27.4%
On-road	2,437	1,125	951	1,486	61.0%
Non-road	1,728	1,598	927	801	46.4%
<b>Total</b>	<b>20,889</b>	<b>15,646</b>	<b>14,602</b>	<b>6,287</b>	<b>30.1%</b>

**Table 9a. Comparison of 2008, 2017, and 2025 Emissions of NO<sub>x</sub> for the Delaware Portion of the Philadelphia Area (tpy)**

Sector	NO <sub>x</sub>						
	2008	2017	2025	2008-2017		2008-2025	
				Reduction	Percent Reduction	Reduction	Percent Reduction
Non-point	1,287	1,299	1,297	-12	-0.9%	-10	-0.8%
Non-road, MAR	2,641	1,760	1,247	881	33.3%	1,394	52.8%
Non-road, NMIM	1,676	997	837	679	40.5%	840	50.1%
On-road	9,311	6,273	6,273	3,038	32.6%	3,038	32.6%
Point, EGU	2,185	1,629	1,707	556	25.4%	478	21.9%
Point, non-EGU	3,404	1,724	1,421	1,680	49.4%	1,983	58.3%
<b>Total</b>	<b>20,504</b>	<b>13,682</b>	<b>12,782</b>	<b>6,822</b>	<b>33%</b>	<b>7,722</b>	<b>38%</b>

**Table 9b. Comparison of 2008, 2017, and 2025 Emissions of NO<sub>x</sub> for the Entire Philadelphia Area (tpy)**

Sector	NO <sub>x</sub>				
	2008	2017	2025	2008-2025	
				Reduction	Percent Reduction
Point	31,233	12,833	19,489	11,744	37.6%
Non-point	23,477	22,807	23,085	392	1.7%
On-road	25,905	17,028	14,366	11,540	44.5%
Non-road	66,631	38,892	16,701	49,930	74.9%
<b>Total</b>	<b>147,247</b>	<b>91,560</b>	<b>73,640</b>	<b>73,606</b>	<b>50.0%</b>

**Table 10a. Comparison of 2008, 2015, and 2025 Emissions of SO<sub>2</sub> for the Delaware Portion of the Philadelphia Area (tpy)**

Sector	SO <sub>2</sub>						
	2008	2017	2025	2008-2017		2008-2025	
				Reduction	Percent Reduction	Reduction	Percent Reduction
Non-point	402	336	286	66	16.5%	116	28.8%
Non-road, MAR	1,039	120	39	919	88.4%	1,000	96.2%
Non-road, NMIM	28	2	3	25	91.0%	25	88.4%
On-road	94	98	98	-3	-3.4%	-3	-3.4%
Point, EGU	7,122	2,017	2,161	5,104	71.7%	4,960	69.7%
Point, non-EGU	3,454	2,559	2,096	895	25.9%	1,358	39.3%
<b>Total</b>	<b>12,139</b>	<b>5,132</b>	<b>4,683</b>	<b>7,007</b>	<b>58%</b>	<b>7,456</b>	<b>61%</b>

**Table 10b. Comparison of 2008, 2015, and 2025 Emissions of SO<sub>2</sub> for the Entire Philadelphia Area (tpy)**

Sector	SO <sub>2</sub>				
	2008	2017	2025	2008-2025	
				Reduction	Percent Reduction
Point	29,340	11,201	11,350	17,990	61.3%
Non-point	17,016	13,669	9,903	7,113	41.8%
On-road	5,312	737	614	4,698	88.4%
Non-road	416	311	227	189	45.4%
<b>Total</b>	<b>52,085</b>	<b>25,919</b>	<b>22,095</b>	<b>29,990</b>	<b>57.6%</b>

Sections 8.2.3, Control Measures for Maintenance of Good Air Quality, in Delaware's maintenance plans and redesignation requests for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards, summarize emission reductions between the attainment years and the maintenance plan end years, i.e. between 2007 or 2008 and 2025 in the Delaware portion of the Area. The emissions reductions data include in Tables 8-6 of Sections 8.2.3 of Delaware's redesignations requests and maintenance plans for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS are summarized in Tables 11a and 11b, for the 1997 annual and 2006 24-hour NAAQS, respectively.



**Table 11a. 2007 to 2025 Emission Reductions due to Control Measures for the 1997 Annual PM<sub>2.5</sub> Standard**

	<b>NO<sub>x</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>
<b>EGUs</b>			
DE Admin Code 1146 (Multi-Pollutant Regulation)	1,240.8	10.5	6,562.4
<b>Non-EGUs</b>			
Delaware City Refinery NO <sub>x</sub> CAP (1650 tpy) post-2015	1,157.26	0.00	0.00
Reciprocating Internal Combustion Engines - Maximum Achievable Control Technology, (RICE MACT) (76 FR 12863)	0.02	0.08	0.00
Chrysler Plant Shutdown /unit shutdown	6.50	0.89	16.64
<b>Non-point</b>			
RICE MACT	42.51	0.30	0.00
EPA New Source Performance Standards for Woodstoves (NSPS), 40 CFR part 60, subpart AAA.	5.00	76.64	0.84
<b>Non-road (NMIM model)</b>	918	53	88
<b>On-road (MOVES model)</b>	4,304	125	2
<b>Marine Vessels, Aircraft and Locomotives (MAR)</b>			
Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder; Republication; Final Rule. (73 FR 37096)	933	37	152
Control of Emissions From New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder (75 FR 22895)	631	90	836
<b>TOTALS</b>	<b>9,241</b>	<b>394</b>	<b>7,660</b>

**Table 11b. 2008 to 2025 Emission Reductions due to Control Measures for the 2006 24-hour PM<sub>2.5</sub> Standard**

	<b>NO<sub>x</sub></b>	<b>PM<sub>2.5</sub></b>	<b>SO<sub>2</sub></b>
<b>EGUs</b>			
DE Admin Code 1146 (Multi-Pollutant Regulation)	953.4	3.5	5,171.1
<b>Non-EGUs</b>			
Delaware City Refinery NO <sub>x</sub> CAP (1650 tpy) post-2015	874.7	0.0	0.0
RICE MACT (76 FR 12863)	0.0	0.1	0.0
Chrysler Plant Shutdown /unit shutdown	8.4	0.7	6.0
<b>Area</b>			
RICE MACT	42.5	0.3	0.3
Woodstoves NSPS, 40 CFR part 60	4.9	74.1	0.8
<b>Non-road (NMIM model)</b>	840	45	25
<b>On-road (MOVES model)</b>	3,038	83	-3
<b>Marine Vessels, Aircraft and Locomotives (MAR)</b>			
Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder; Republication; Final Rule. (73 FR 37096)	862.3	32.9	150.1
Control of Emissions From New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder (75 FR 22895)	597.3	90.7	850.7
<b>TOTAL</b>	<b>7,221</b>	<b>330</b>	<b>6,200</b>

Delaware included Regulation 1142, Section 2.0, Control of Nitrogen Oxide (NO<sub>x</sub>) Emissions from Industrial Boilers and Process Heaters at Petroleum Refineries, in that list. However, as explained above, Regulation 1142, Section 2.0 is the subject of a separate proposed rulemaking action, published on February 22, 2013 (78 FR 12460). Therefore, EPA has conducted an analysis to determine if the area can demonstrate maintenance without emission reductions from that regulation.

Delaware has determined that Regulation 1142, Section 2.0, also known as the Delaware City Refinery NO<sub>x</sub> Cap, achieves 1,157.26 tons of NO<sub>x</sub> reductions between 2007 and 2025, and

874.7 tons of NO<sub>x</sub> reductions between 2008 and 2025. (See Tables 8-6 of Delaware's redesignation requests for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS, respectively.)

**Table 12. Maintenance Demonstration, Not Considering Emission Reductions from Delaware Regulation 1142**

1997 annual PM <sub>2.5</sub> NAAQS NO <sub>x</sub> (tons)			2006 24-hour PM <sub>2.5</sub> NAAQS NO <sub>x</sub> (tons)	
2025 Maintenance Year	81,868		2025 Maintenance Year	73,640
Plus Reductions from Regulation 1142, Section 2	1,157.26		Plus Reductions from Regulation 1142, Section 2	874.7
Adjusted 2025	83,025		Adjusted 2025	74,515
2007 Attainment Year	187,967		2008 Attainment Year	147,247

In both cases, the adjusted 2025 NO<sub>x</sub> emissions are well below the attainment year emissions. Therefore, Regulation 1142, Section 2 is not needed for maintenance of either the 1997 annual or 2006 24-hour PM<sub>2.5</sub> NAAQS. Therefore, EPA is not relying upon Regulation 1142, Section 2.0 in its evaluation of Delaware's maintenance plans for the 1997 annual or 2006 24-hour PM<sub>2.5</sub> NAAQS.

### 3. Monitoring Network

There are four PM<sub>2.5</sub> monitors in the Delaware portion of the Philadelphia Area. Delaware's maintenance plans include a commitment to continue to operate its EPA-approved monitoring network, as necessary to demonstrate ongoing compliance with the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. DNREC will consult with EPA prior to making any necessary changes to the PM<sub>2.5</sub> monitoring network and will continue to quality assure the monitoring data in accordance with the requirements of 40 CFR part 58.

#### **4. Verification of Continued Attainment**

Delaware will acquire ambient monitoring and source emission data to track attainment and maintenance. Delaware will also track the progress of the maintenance demonstration by periodically updating the emissions inventory as required by the Annual Air Emissions Reporting Requirements Rule (AERR), or as required by federal regulation during the maintenance plan period. This includes developing annual inventories for major point sources and a comprehensive periodic inventory covering all source categories every three years. Tracking will include the evaluation of annual and periodic evaluations for any significant emission increases above the 2007 and 2008 attainment year levels.

#### **5. Contingency Measures**

The contingency plan provisions are designed to promptly correct a violation of either the 1997 annual or the 2006 24-hour PM<sub>2.5</sub> NAAQS that occurs in the Area after redesignation. Section 175A of the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to ensure that Delaware will promptly correct a violation of either the 1997 annual or the 2006 24-hour PM<sub>2.5</sub> NAAQS that occurs in the Area after redesignation. The maintenance plan should identify the events that would “trigger” the adoption and implementation of a contingency measure(s), the contingency measure(s) that would be adopted and implemented, and the schedule indicating the time frame by which the state would adopt and implement the measure(s).

Delaware’s maintenance plans outline the procedures for the adoption and implementation of contingency measures to further reduce emissions should a violation occur. Delaware’s

contingency measures include a warning level response and an action level response. An initial warning level response is triggered for the 1997 annual PM<sub>2.5</sub> NAAQS when the PM<sub>2.5</sub> average of the weighted annual mean for a single calendar year exceeds 15.1 µg/m<sup>3</sup> at any monitor within the Philadelphia Area. An initial warning level response is triggered for the 2006 24-hour PM<sub>2.5</sub> NAAQS when the 98<sup>th</sup> percentile 24-hour PM<sub>2.5</sub> concentration for a single calendar year exceeds 35.5 µg/m<sup>3</sup> within the Area. In addition, for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub>, a warning level response is also triggered if total PM<sub>2.5</sub>, NO<sub>x</sub> and SO<sub>2</sub> emissions in the Delaware portion of the Area increase more than 10% above attainment year levels.

For the 1997 annual PM<sub>2.5</sub> NAAQS, the action level response will be prompted by any one of the following: (1) a two-year average of the weighted annual mean of 15.1 µg/m<sup>3</sup> or greater occurs within the Area; or (2) a violation of the standard occurs in the Area (i.e. a three-year average of the weighted annual means of 15.1 µg/m<sup>3</sup> or greater). For the 2006 24-hour PM<sub>2.5</sub> NAAQS, the action level response will be prompted by any one of the following: (1) a two-year average of the 98<sup>th</sup> percentile of 35.5 µg/m<sup>3</sup> or greater within the Area; or (2) a violation of the standard occurs in the Area (i.e. a three-year average of the 98<sup>th</sup> percentile of 35.5 µg/m<sup>3</sup> or greater).

In order to select appropriate corrective measures for warning or action level triggers, DNREC will conduct a study to determine the causes of the violation and the control measures necessary to mitigate the problem. The study will evaluate whether the trend, if any, is likely to continue and if so, the control measures necessary to reverse the trend taking into consideration ease and timing for implementation as well as economic and social considerations. Based on the results of the analysis, contingency measures will be selected. However, if a new measure is already

promulgated and scheduled to be implemented at the federal or state level at such time after the exceedance, and that measure or control is determined to be sufficient to address the upward trend in air quality, additional local measures may be unnecessary. Delaware will submit to EPA an analysis to demonstrate the proposed measures are adequate to return the area to attainment. Adoption of additional control measures is subject to necessary administrative and legal processes.

Should a warning level response be triggered, measures that can be implemented in a short time will be selected in order to be in place within 18 months from the close of the calendar year that prompted the warning level. Should an action level response be triggered, implementation of necessary control measures will take place as expeditiously as possible, but in no event later than 18 months after the DNREC makes a determination, based on quality-assured ambient data, that a violation of the NAAQS has occurred.

DNREC has indentified the following potential contingency measures for both the 1997 annual and 2006 24-hour maintenance plans.

- Lower particulate limits for No. 6 fuel oil-fired boilers.
- Working with the local metropolitan planning agencies to implement transportation control measures.
- Low-sulfur distillate and residual fuels.

- Additional PM<sub>2.5</sub> controls for EGUs and large industrial boilers burning fuels other than distillate fuel or natural gas.
- Vehicle inspection and maintenance program enhancements (increase weight limit, addition of diesel vehicles, etc.).
- Alternative fuel and additional diesel retrofit programs for fleet vehicle operations.
- Require NO<sub>x</sub> or SO<sub>2</sub> emission offsets for new and modified major sources.
- Increase the ratio of emission offsets required for new sources.
- Require NO<sub>x</sub> or SO<sub>2</sub> controls on new minor sources (less than 100 tons).
- Require increased recovery efficiency at sulfur recovery plants.
- Broader geographic applicability of existing measures.
- Fuel switching from coal to natural gas at the Calpine Edge Moor power plant (contingency measure only in the 24-hour PM<sub>2.5</sub> NAAQS maintenance plan).

## **6. EPA's Evaluation of VOC and Ammonia Precursors in Delaware's Maintenance Plans**

With regard to the redesignation of the Delaware portion of the Philadelphia Area in evaluating the effect of the Court's remand of EPA's 1997 PM<sub>2.5</sub> Implementation Rule, which included presumptions against consideration of VOC and ammonia as PM<sub>2.5</sub> precursors, EPA in this proposed rulemaking action is also considering the impact of the decision on the maintenance plan required under sections 175A and 107(d)(3)(E)(iv). To begin with, EPA notes that the Area

has attained both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standard and that Delaware has shown that attainment of these standards is due to permanent and enforceable emission reductions.

EPA proposes to determine that the Delaware's maintenance plan shows continued maintenance of the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards by tracking the levels of the precursors whose control brought about attainment of the standards in the Philadelphia Area. EPA, therefore, believes that the only additional consideration related to the maintenance plan requirements that results from the Court's January 4, 2013 decision is that of assessing the potential role of VOC and ammonia in demonstrating continued maintenance in this Area. As explained subsequently, based upon documentation provided by the State and supporting information, EPA believes that the maintenance plans for the Delaware portion of the Area need not include any additional emission reductions of VOC or ammonia in order to provide for continued maintenance of the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS.

First, as noted previously in EPA's discussion of section 189(e), VOC emission levels in the Philadelphia Area have historically been well-controlled under SIP requirements related to ozone and other pollutants. Second, total ammonia emissions throughout the Philadelphia Area are low, especially in comparison to the total amounts of SO<sub>2</sub>, NO<sub>x</sub>, and even direct PM<sub>2.5</sub> emissions from sources in the Area.

In the Philadelphia Area, emissions of direct PM<sub>2.5</sub>, NO<sub>x</sub>, and SO<sub>2</sub> are projected to decrease by 9,055 tpy, 106,099 tpy, and 34,265 tpy, respectively, over the maintenance period for the 1997 annual PM<sub>2.5</sub> NAAQS and by 6,287 tpy, 73,606 tpy, and 29,990 tpy, respectively, over the



maintenance period for the 2006 24-hour PM<sub>2.5</sub> NAAQS. *See* Tables 5b through 10b. In addition, emissions inventories used in the regulatory impact analysis (RIA) for the 2012 PM<sub>2.5</sub> NAAQS<sup>12</sup> show that VOC and ammonia emissions are projected to decrease by 33,076 tpy and 611 tpy, respectively, between 2007 and 2020. *See* Table 13. While the RIA emissions inventories are only projected out to 2020, there is no reason to believe that this downward trend would not continue through 2025. Given that the Philadelphia Area is already attaining the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS even with the current level of emissions from sources in the area, the downward trend of emissions inventories would be consistent with continued attainment. Indeed, projected emissions reductions for the precursors that the State is addressing for purposes of the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS indicate that the area should continue to attain the NAAQS following the precursor control strategy that the state has already elected to pursue. Even if VOC and ammonia emissions were to increase unexpectedly between 2020 and 2025, the overall emissions reductions projected in direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> would be sufficient to offset any increases. For these reasons, EPA believes that local emissions of all of the potential PM<sub>2.5</sub> precursors will not increase to the extent that they will cause monitored PM<sub>2.5</sub> levels to violate the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standard during the maintenance period.

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<sup>12</sup> Review of the NAAQS for Particulate Matter - Regulatory Impact Analysis.” Docket ID No. EPA-HQ-OAR-2010-0955.

**Table 13. Comparison of 2007 and 2020 Emissions of VOC and Ammonia for the Entire Philadelphia Area, in tpy<sup>13</sup>**

Sector	VOC			Ammonia		
	2007	2020	Net Change 2007-2020	2007	2020	Net Change 2007-2020
<b>Point</b>	9,475	8,906	569	905	1,085	-180
<b>Area</b>	71,981	72,537	-556	4,821	5,001	-180
<b>Non-road</b>	27,267	16,032	11,234	34	40	-6
<b>On-road</b>	35,169	13,340	21,829	2,005	1,029	977
<b>Fires</b>	1,798	1,798	0	125	125	0
<b>Total</b>	<b>145,689</b>	<b>112,613</b>	<b>33,076</b>	<b>7,890</b>	<b>7,279</b>	<b>611</b>

In addition, available air quality modeling analyses show continued maintenance of the standard during the maintenance period. The current annual design value for the Area is 13.7  $\mu\text{g}/\text{m}^3$  and the current 24-hour design value is 33  $\mu\text{g}/\text{m}^3$ , based on 2010-2012 air quality data, which are well below the levels of the 1997 annual and 2006 24-hour  $\text{PM}_{2.5}$  NAAQS. *See* Tables 1 and 2. Moreover, the modeling analysis conducted for the RIA for the 2012  $\text{PM}_{2.5}$  NAAQS indicates that the design values for the Philadelphia Area are expected to continue to decline through 2020. In the RIA analysis, the 2020 modeled annual design value for the Area is 9.4  $\mu\text{g}/\text{m}^3$  and the 2020 24-hour design value is 24  $\mu\text{g}/\text{m}^3$ .<sup>14</sup> Given that most precursor emissions are projected to decrease through 2025, it is reasonable to conclude that monitored  $\text{PM}_{2.5}$  levels in the Area will also continue to decrease through 2025.

Thus, EPA believes that there is ample justification to conclude that the Delaware portion of the Philadelphia Area should be redesignated, even taking into consideration the emissions of other

<sup>13</sup> These emissions estimates were taken from the emissions inventories developed for the RIA for the 2012  $\text{PM}_{2.5}$  NAAQS.

<sup>14</sup> The 2020 projected  $\text{PM}_{2.5}$  design values are part of the RIA for the 2012  $\text{PM}_{2.5}$  NAAQS.

precursors potentially relevant to PM<sub>2.5</sub>. After consideration of the D.C. Circuit's January 4, 2013 decision, and for the reasons set forth in this rulemaking action, EPA proposes to approve Delaware's maintenance plans and requests to redesignate its portion of the Philadelphia Area to attainment for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards. This proposed approval is based on a showing that Delaware's maintenance plans provides for maintenance of both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards for at least ten years after redesignation, throughout 2025, in accordance with section 175A.

### **C. Motor Vehicle Emissions Budgets**

Section 176(c) of the CAA requires Federal actions in nonattainment and maintenance areas to "conform to" the goals of SIPs. This means that such actions will not cause or contribute to violations of a NAAQS, worsen the severity of an existing violation, or delay timely attainment of any NAAQS or any interim milestone. Actions involving Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding or approval are subject to the transportation conformity rule (40 CFR part 93, subpart A). Under this rule, metropolitan planning organizations (MPOs) in nonattainment and maintenance areas coordinate with state air quality and transportation agencies, EPA, and the FHWA and FTA to demonstrate that their long range transportation plans and transportation improvement programs (TIP) conform to applicable SIPs. This is typically determined by showing that estimated emissions from existing and planned highway and transit systems are less than or equal to the MVEBs contained in the SIP.

On December 12, 2012, Delaware submitted a SIP revision that contains the PM<sub>2.5</sub> and NO<sub>x</sub> on-road mobile source budgets. In a separate and concurrent process, EPA is conducting a process

to find adequate the MVEBs for New Castle County which are associated with the Delaware maintenance plan for the Philadelphia Area. Concurrently with EPA's proposal to approve the SIP, a notice will be posted on EPA's Web site at <http://www.epa.gov/otaq/stateresources/transconf/currrips.htm> for the purpose of opening a 30-day public comment period on the adequacy of the MVEBs for New Castle County in the maintenance plan for the Philadelphia Area. That notice will inform the public of the availability of the Delaware SIP revision on DNREC's website. Interested members of the public can access Delaware's December 12, 2012 SIP revision on line at [www.regulations.gov](http://www.regulations.gov), Docket No. EPA-R03-OAR-2014-0022. Following EPA's public comment period, responses to any comments received will be addressed. EPA has reviewed the MVEBs and found them consistent with the maintenance plan and that the budgets meet the criteria for adequacy and approval. Additional information pertaining to the review of the MVEBs can be found in the TSD in this docket titled *Adequacy Findings for the Motor Vehicle Emissions Budgets in the Maintenance Plan for the Delaware Portion of the Philadelphia-Wilmington PA-NJ-DE 1997 Fine Particulate (PM<sub>2.5</sub>) National Ambient Air Quality Standard (NAAQS) Nonattainment Area*.

## **VI. Proposed Actions**

EPA is proposing to approve Delaware's requests to redesignate the Delaware portion of the Philadelphia Area from nonattainment to attainment for the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS. EPA has evaluated Delaware's redesignation requests and determined that upon approval of the 2008 comprehensive emissions inventory for the 2006 24-hour PM<sub>2.5</sub> NAAQS proposed as part of this rulemaking action, it would meet the redesignation criteria set forth in section 107(d)(3)(E) of the CAA for both standards. EPA believes that the monitoring data

demonstrate that the Philadelphia Area is attaining and will continue to attain the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS. EPA is also proposing to approve the associated maintenance plans for the Delaware portion of the Area as a revision to the Delaware SIP for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards because it meets the requirements of CAA section 175A for both standards. For transportation conformity purposes, EPA is also proposing to approve MVEBs for both the 1997 annual and 2006 24-hour PM<sub>2.5</sub> standards. Final approval of the redesignation requests would change the official designations of the Delaware portion of the Philadelphia Area for the 1997 annual and the 2006 24-hour PM<sub>2.5</sub> NAAQS, respectively, found at 40 CFR part 81, from nonattainment to attainment, and would incorporate into the Delaware SIP the associated maintenance plans ensuring continued attainment of the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS in the Delaware portion of the Area for the next 10 years, until 2025. EPA is soliciting public comments on the issues discussed in this document. These comments will be considered before taking final action.

## **VII. Statutory and Executive Order Reviews**

Under the CAA, redesignation of an area to attainment and the accompanying approval of the maintenance plan under CAA section 107(d)(3)(E) are actions that affect the status of geographical area and do not impose any additional regulatory requirements on sources beyond those required by state law. A redesignation to attainment does not in and of itself impose any new requirements, but rather results in the application of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's

role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to approve state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law and the CAA. For that reason, this proposed action:

- is not a “significant regulatory action” subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 et seq.);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- does not provide EPA with the discretionary authority to address, as appropriate,

disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule, in which EPA is proposing approval of the redesignation requests and maintenance plans for the Delaware portion of the Philadelphia Area for the 1997 annual and 2006 24-hour PM<sub>2.5</sub> NAAQS and the 2008 comprehensive emissions inventory for the 2006 24-hour PM<sub>2.5</sub> NAAQS, does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

## **List of Subjects**

### **40 CFR Part 52**

Environmental protection, Air pollution control, Nitrogen oxides, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

### **40 CFR Part 81**

Air pollution control, National parks, and Wilderness areas.

**Authority:** 42 U.S.C. 7401 et seq.

Dated: April 2, 2014.

Shawn M. Garvin,  
Regional Administrator,  
Region III.

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